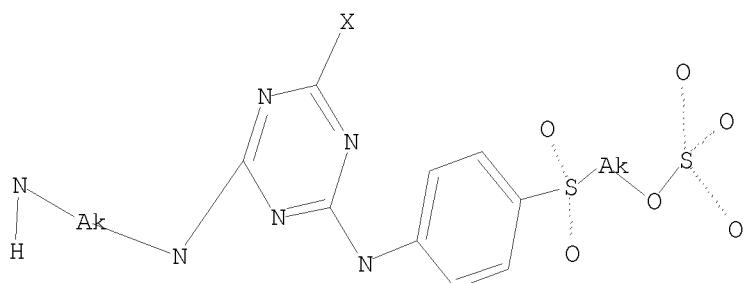


L20 STRUCTURE UPLOADED

=> d

L20 HAS NO ANSWERS

L20 STR



G1 Cy,Ak

Structure attributes must be viewed using STN Express query preparation.

=> s 120

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SAMPLE SCREEN SEARCH COMPLETED - 292 TO ITERATE

100.0% PROCESSED 292 ITERATIONS

4 ANSWERS

SEARCH TIME: 00.00.01

FULL FILE PROJECTIONS: ONLINE **COMPLETE**
BATCH **COMPLETE**

PROJECTED ITERATIONS: 4815 TO 6865

PROJECTED ANSWERS: 4 TO 200

L21 4 SEA SSS SAM L20

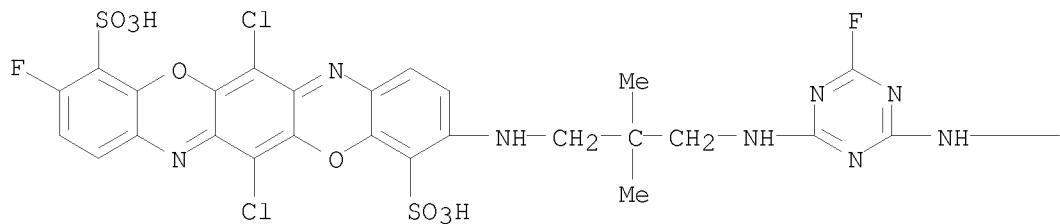
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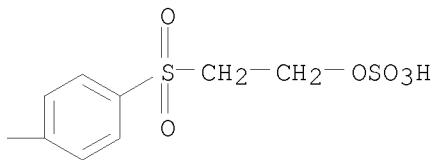
L21 4 ANSWERS REGISTRY COPYRIGHT 2008 ACS on STN

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MF C34 H28 Cl2 F2 N8 O14 S4

PAGE 1-A





PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

HOW MANY MORE ANSWERS DO YOU WISH TO SCAN? (1):0

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 FULL SEARCH INITIATED 09:45:47 FILE 'REGISTRY'
 FULL SCREEN SEARCH COMPLETED - 5840 TO ITERATE

100.0% PROCESSED 5840 ITERATIONS 68 ANSWERS
 SEARCH TIME: 00.00.01

L22 68 SEA SSS FUL L20

| | | | |
|--|------------------|---------------|--|
| => file caplus | | | |
| COST IN U.S. DOLLARS | SINCE FILE ENTRY | TOTAL SESSION | |
| FULL ESTIMATED COST | 178.36 | 406.45 | |
| DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS) | SINCE FILE ENTRY | TOTAL SESSION | |
| CA SUBSCRIBER PRICE | 0.00 | -6.40 | |

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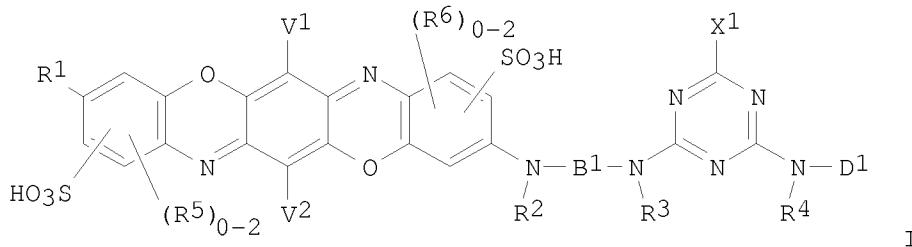
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L23 ANSWER 1 OF 17 CAPLUS COPYRIGHT 2008 ACS on STN
 ACCESSION NUMBER: 2007:761252 CAPLUS <<LOGINID::20080225>>
 DOCUMENT NUMBER: 147:167741
 TITLE: Triphenodioxazine reactive dyes, a process for their preparation and their use
 INVENTOR(S): Reichert, Hans; Verdugo, Thomas
 PATENT ASSIGNEE(S): Huntsman Advanced Materials (Switzerland) G.m.b.H., Switz.
 SOURCE: PCT Int. Appl., 55pp.
 CODEN: PIXXD2
 DOCUMENT TYPE: Patent
 LANGUAGE: English
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|---|------|----------|-----------------|----------|
| ----- | ---- | ----- | ----- | ----- |
| WO 2007077129 | A2 | 20070712 | WO 2006-EP69978 | 20061220 |
| WO 2007077129 | A3 | 20071101 | | |
| W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GT, HN, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KN, KP, KR, KZ, LA, LC, LK, LR, LS, LT, LU, LV, LY, MA, MD, MG, MK, MN, MW, MX, MY, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RS, RU, SC, SD, SE, SG, SK, SL, SM, SV, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, ZA, ZM, ZW RW: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, LV, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG, BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AP, EA, EP, OA | | | | |

PRIORITY APPLN. INFO.: EP 2006-100014 A 20060102
 GI



AB The invention relates to reactive dyes of formula I: wherein R1 is halogen, R2, R3 and R4 are each independently of the others hydrogen or unsubstituted or substituted C1-C4alkyl, (R5)0-2 and (R6)0-2 each independently of the other denote from 0 to 2 identical or different substituents from the group C1-C4 alkyl, C1-C4 alkoxy, C2-C4 alkanoylamino, carboxy, sulfo, carbamoyl, N-C1-C4 alkylcarbamoyl,

N,N-di-C1-C4 alkylcarbamoyl, C1-C 4 alkylsulfonyl, sulfamoyl, N-C1-C4 alkylsulfamoyl and N,N-di-C1-C4 alkylsulfamoyl, B1 is an aliphatic or aromatic bridging member, D1 is a radical of the aliphatic, aromatic or heterocyclic series substituted by at least one fiber-reactive group, V1 and V2 are each independently of the other hydrogen, halogen, C1-C4 alkyl, C1-C4 alkoxy, or unsubstituted or substituted Ph, unsubstituted or substituted phenoxy, unsubstituted or substituted C2-C6 alkanoylamino or unsubstituted or substituted benzoylamino, and X1 is halogen, hydroxy, C1-C4 alkoxy, C1-C4 alkylthio, unsubstituted or substituted amino or an N-heterocycle which may contain further hetero atom(s). The reactive dyes are suitable for the dyeing of an extremely wide variety of fiber materials, especially cellulosic fiber materials, and yield dyeings having good all round fastness properties.

IT 943843-73-0P 943843-81-0P 943843-94-5P
 943843-95-6P 943844-08-4P 943844-10-8P
 943844-24-4P 943844-26-6P 943844-63-1P
 943844-64-2P 943844-66-4P 943844-70-0P
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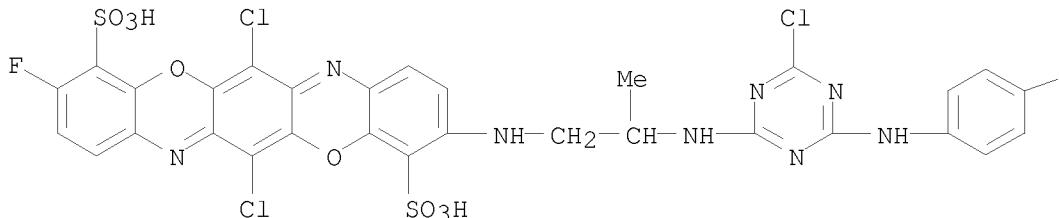
RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)

(brilliant blue dye; production of triphenodioxazine reactive dyes for dyeing fabrics with good fastness properties)

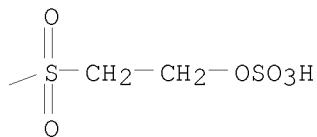
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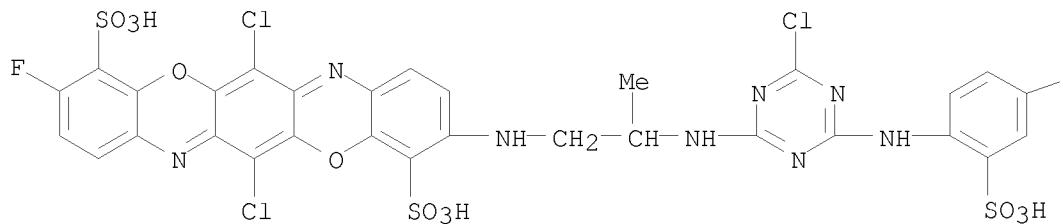
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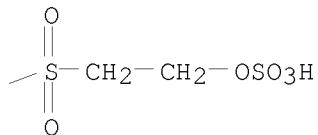
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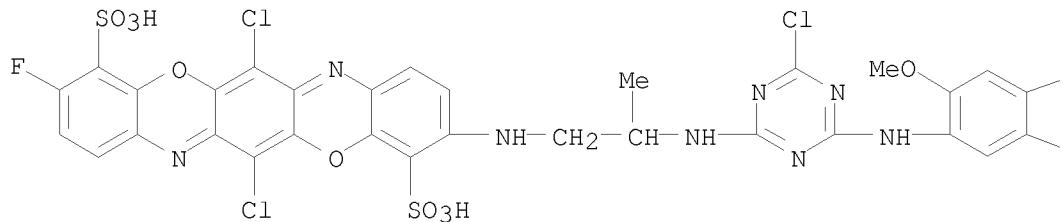
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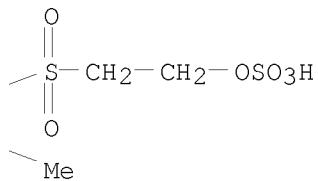
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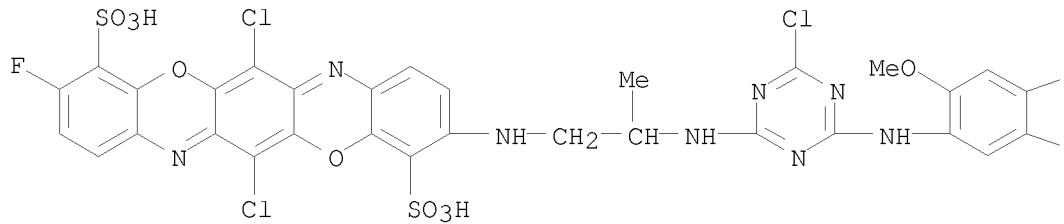
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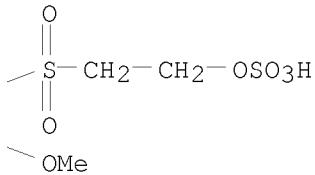
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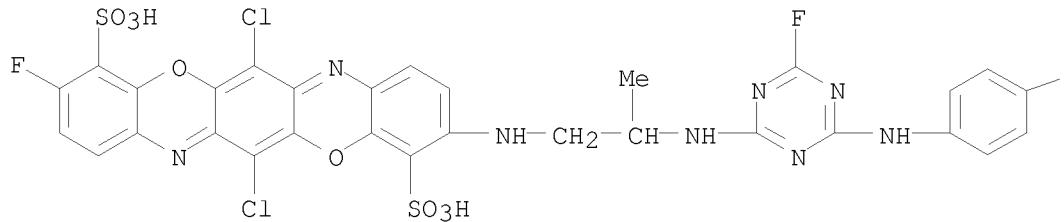
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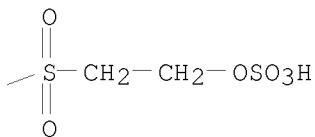
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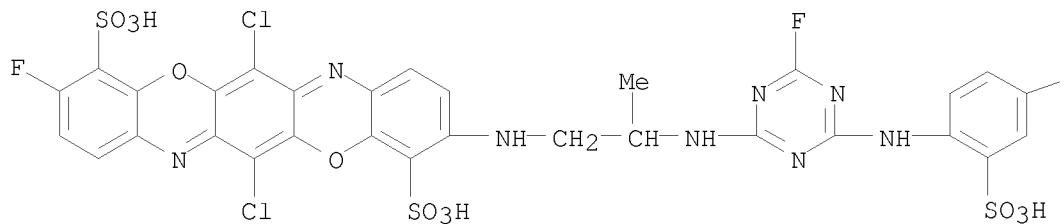
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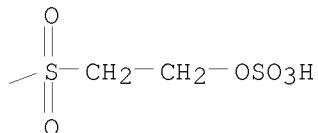
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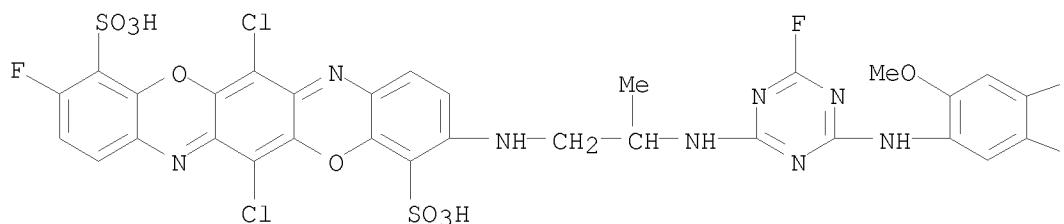
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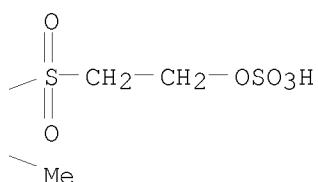
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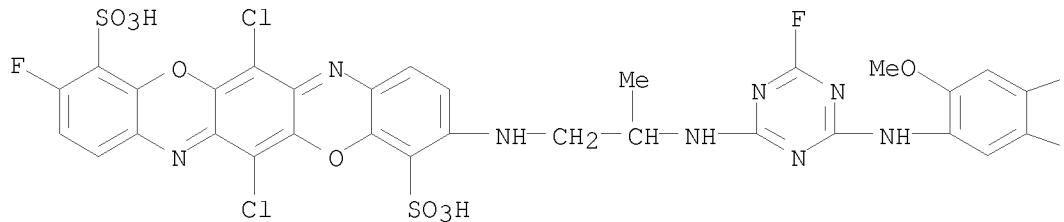
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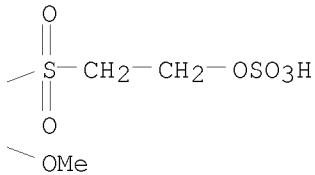
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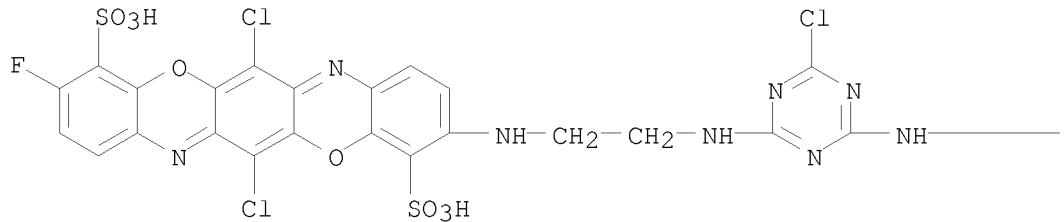
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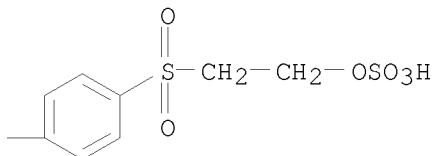
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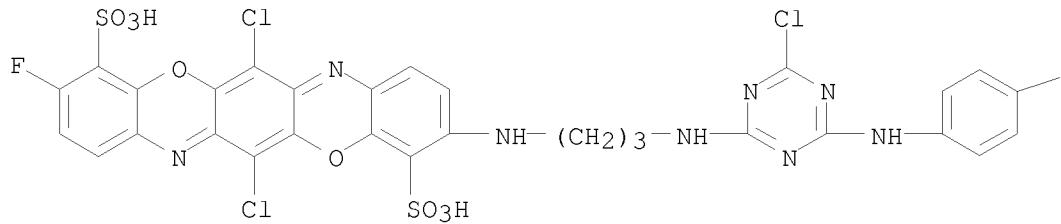
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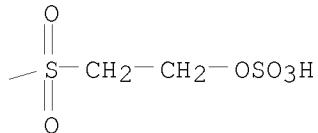
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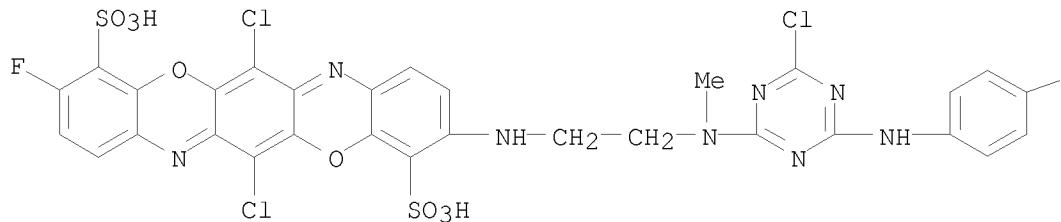
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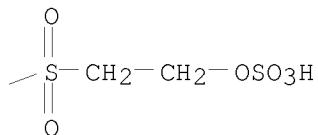
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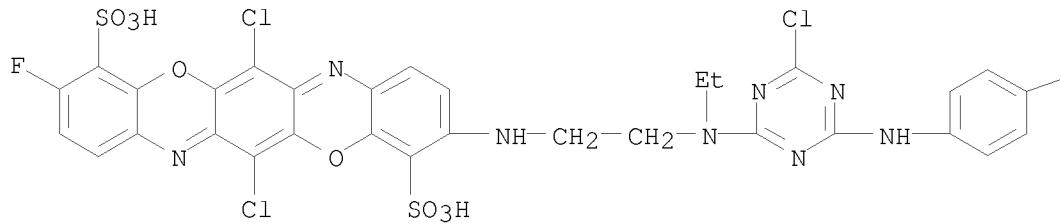
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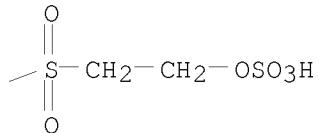
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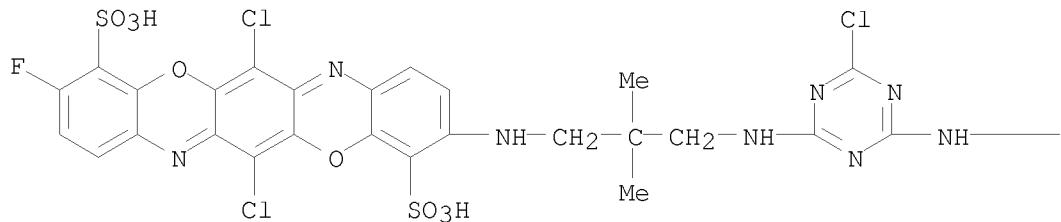
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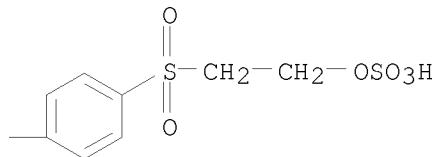
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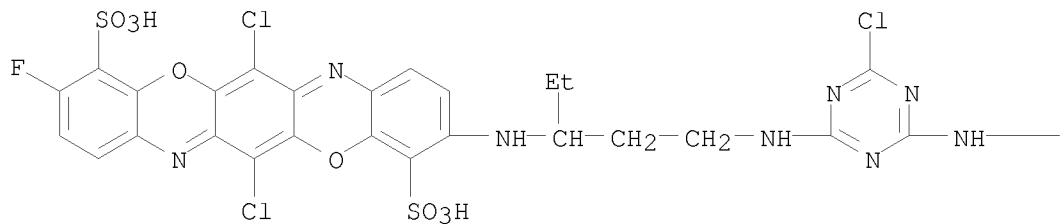
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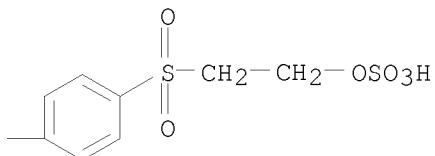
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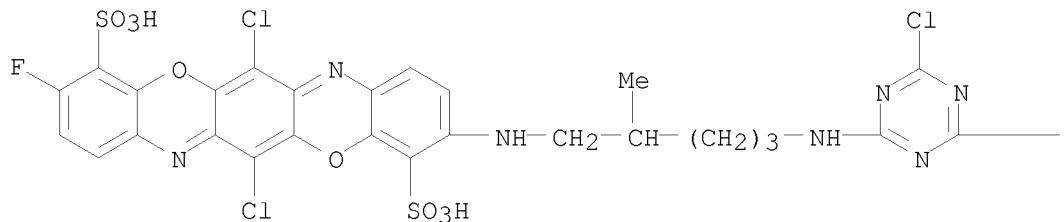
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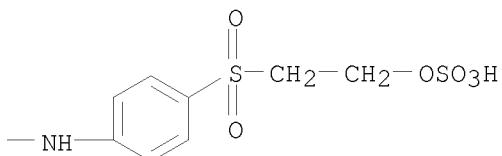
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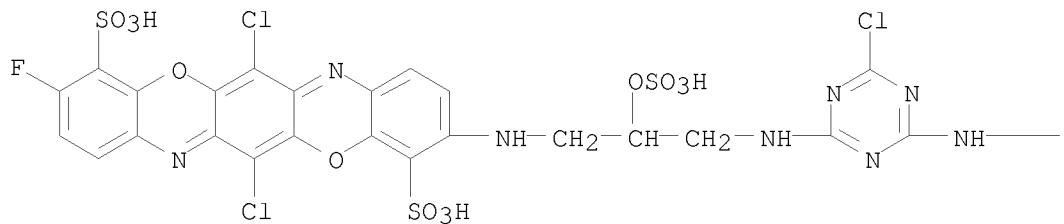
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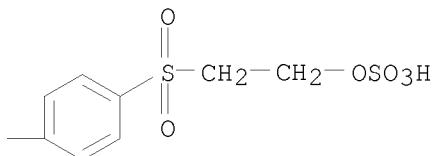
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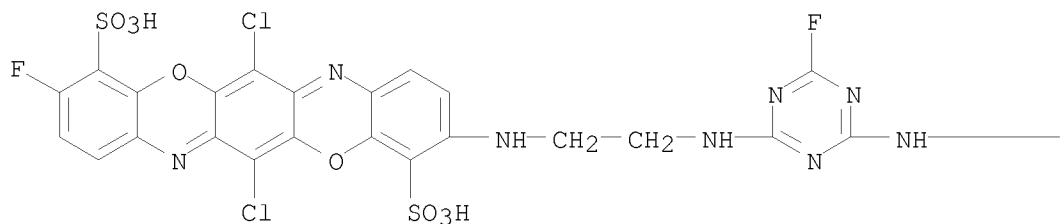
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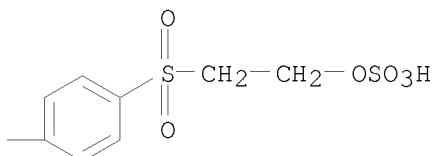
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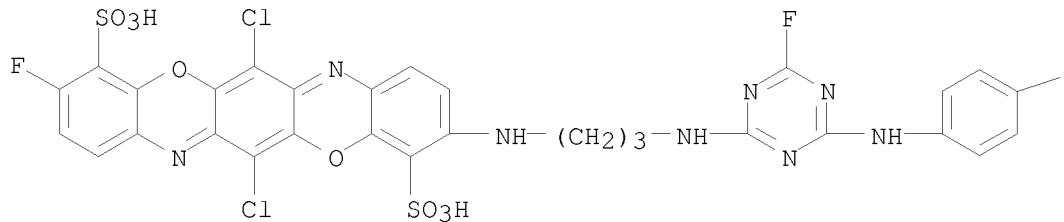
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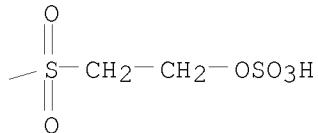
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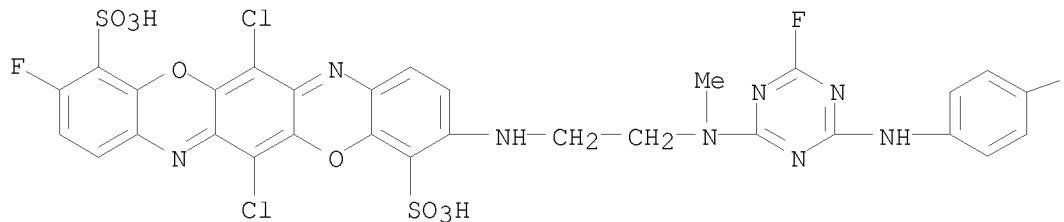
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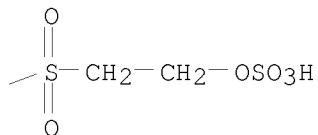
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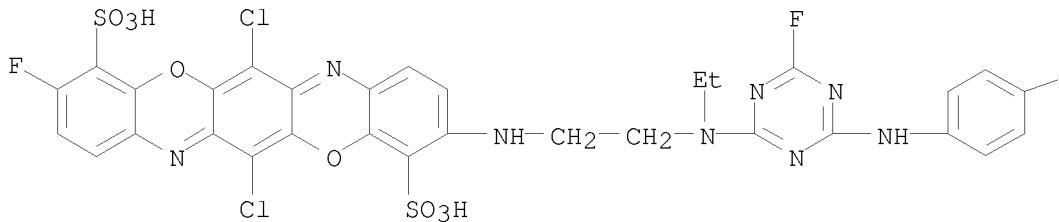
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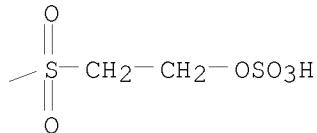
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CN 4,11-Triphenodioxazinedisulfonic acid, 6,13-dichloro-3-[[2-[ethyl[4-fluoro-6-[[4-[[2-(sulfooxy)ethyl]sulfonyl]phenyl]amino]-1,3,5-triazin-2-yl]amino]ethyl]amino]-10-fluoro- (CA INDEX NAME)

PAGE 1-A



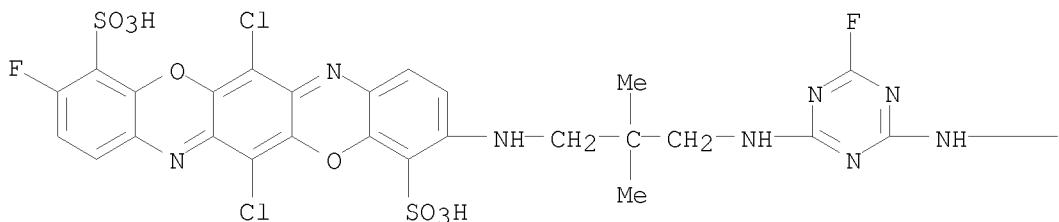
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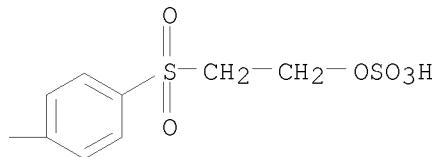
RN 943844-89-1 CAPLUS

CN 4,11-Triphenodioxazinedisulfonic acid, 6,13-dichloro-3-fluoro-10-[[3-[[4-fluoro-6-[[4-[[2-(sulfoxy)ethyl]sulfonyl]phenyl]amino]-1,3,5-triazin-2-yl]amino]-2,2-dimethylpropyl]amino]- (CA INDEX NAME)

PAGE 1-A



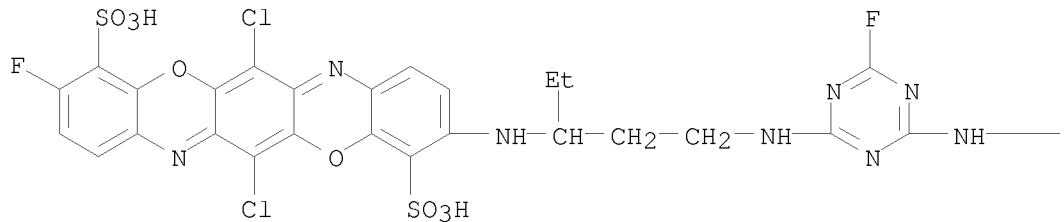
PAGE 1-B



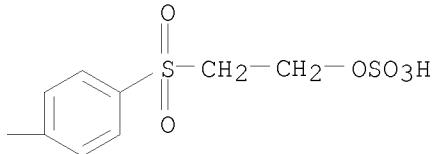
RN 943844-90-4 CAPLUS

CN 4,11-Triphenodioxazinedisulfonic acid, 6,13-dichloro-3-[[1-ethyl-3-[[4-fluoro-6-[[4-[[2-(sulfoxy)ethyl]sulfonyl]phenyl]amino]-1,3,5-triazin-2-yl]amino]propyl]amino]-10-fluoro- (CA INDEX NAME)

PAGE 1-A



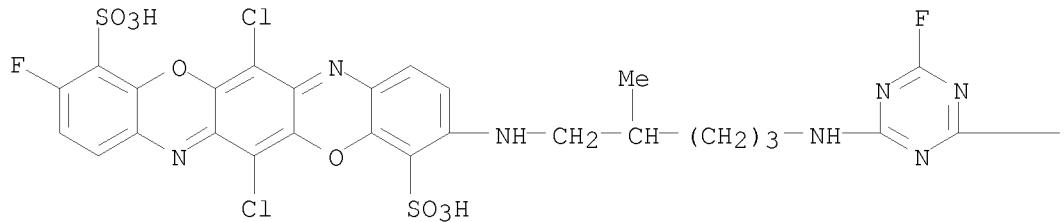
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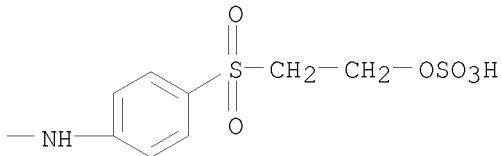
RN 943844-91-5 CAPLUS

CN 4,11-Triphenodioxazinedisulfonic acid, 6,13-dichloro-3-fluoro-10-[[5-[[4-fluoro-6-[[4-[[2-(sulfoxy)ethyl]sulfonyl]phenyl]amino]-1,3,5-triazin-2-yl]amino]-2-methylpentyl]amino]- (CA INDEX NAME)

PAGE 1-A



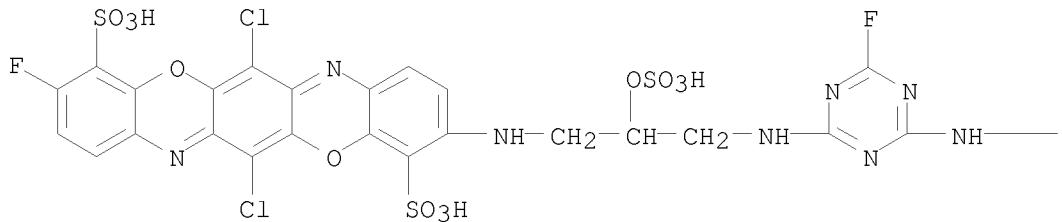
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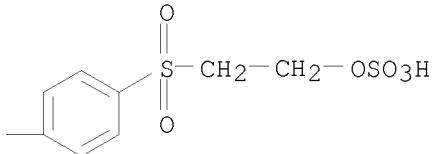
RN 943844-92-6 CAPLUS

CN 4,11-Triphenodioxazinedisulfonic acid, 6,13-dichloro-3-fluoro-10-[[3-[[4-fluoro-6-[[4-[[2-(sulfoxy)ethyl]sulfonyl]phenyl]amino]-1,3,5-triazin-2-yl]amino]-2-(sulfoxy)propyl]amino]- (CA INDEX NAME)

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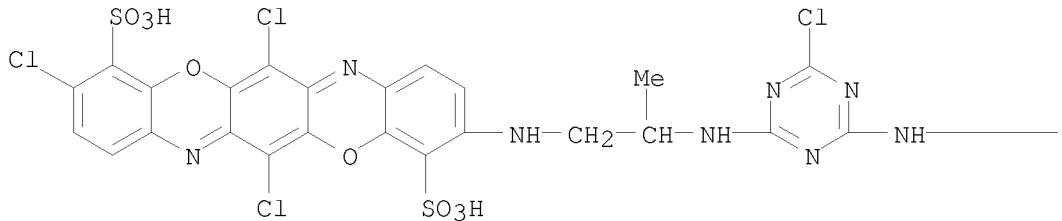
IT 943845-00-9P 943845-01-0P 943845-02-1P
943845-03-2P 943845-04-3P

RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(production of triphenodioxazine reactive dyes for dyeing fabrics with good fastness properties)

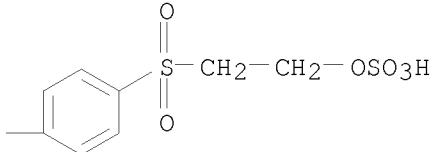
RN 943845-00-9 CAPLUS

CN 4,11-Triphenodioxazinedisulfonic acid, 3,6,13-trichloro-10-[[2-[[4-chloro-6-[[4-[[2-(sulfooxy)ethyl]sulfonyl]phenyl]amino]-1,3,5-triazin-2-yl]amino]propyl]amino]- (CA INDEX NAME)

PAGE 1-A



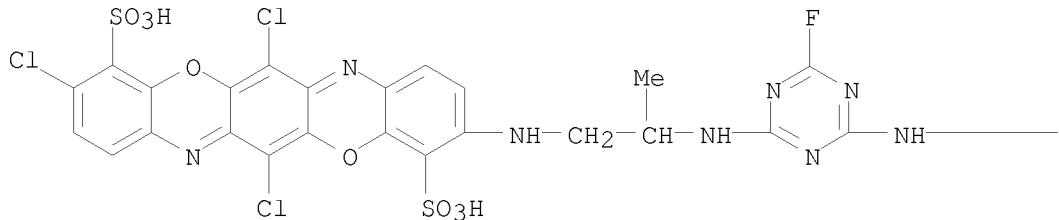
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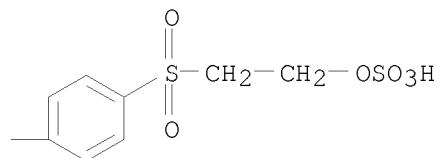
RN 943845-01-0 CAPLUS

CN 4,11-Triphenodioxazinedisulfonic acid, 3,6,13-trichloro-10-[[2-[[4-fluoro-6-[[4-[[2-(sulfoxy)ethyl]sulfonyl]phenyl]amino]-1,3,5-triazin-2-yl]amino]propyl]amino]- (CA INDEX NAME)

PAGE 1-A



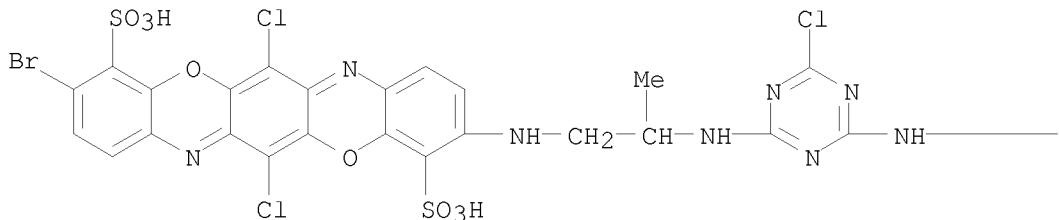
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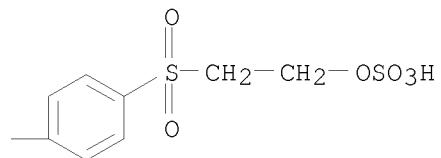
RN 943845-02-1 CAPLUS

CN 4,11-Triphenodioxazinedisulfonic acid, 3-bromo-6,13-dichloro-10-[[2-[[4-chloro-6-[[4-[[2-(sulfoxy)ethyl]sulfonyl]phenyl]amino]-1,3,5-triazin-2-yl]amino]propyl]amino]- (CA INDEX NAME)

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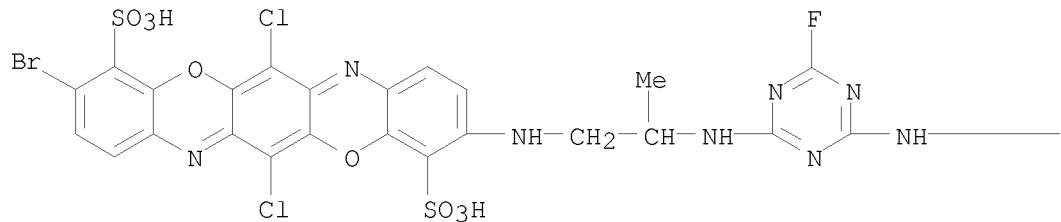


RN 943845-03-2 CAPLUS

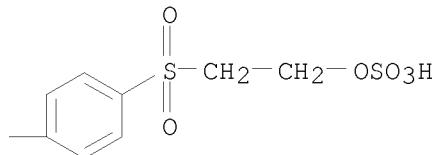
CN 4,11-Triphenodioxazinedisulfonic acid, 3-bromo-6,13-dichloro-10-[[2-[[4-

fluoro-6-[[4-[[2-(sulfoxy)ethyl]sulfonyl]phenyl]amino]-1,3,5-triazin-2-yl]amino]propyl]amino]- (CA INDEX NAME)

PAGE 1-A



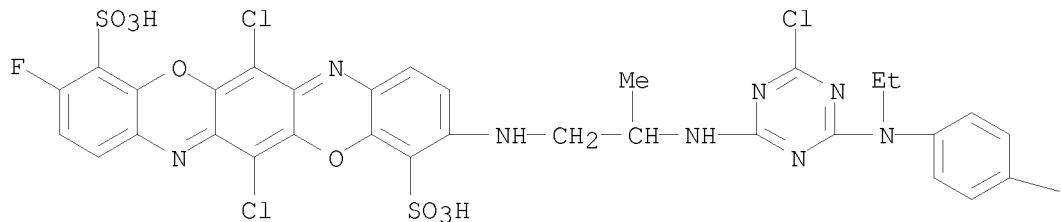
PAGE 1-B



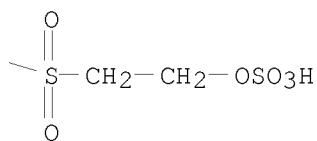
RN 943845-04-3 CAPLUS

CN 4,11-Triphenodioxazinedisulfonic acid, 6,13-dichloro-3-[[2-[[4-chloro-6-yl]amino]propyl]amino]-10-fluoro- (CA INDEX NAME)

PAGE 1-A



PAGE 1-B



L23 ANSWER 2 OF 17 CAPLUS COPYRIGHT 2008 ACS on STN
 ACCESSION NUMBER: 2007:175493 CAPLUS <<LOGINID::20080225>>
 DOCUMENT NUMBER: 146:253562
 TITLE: Azo reactive dyes, their preparation and their application for cotton fiber and fabric dyeing and printing
 INVENTOR(S): Christnacher, Hubert Jean Luc; Tzikas, Athanassios; Roentgen, Georg
 PATENT ASSIGNEE(S): Huntsman Advanced Materials (Switzerland) GmbH, Switz.
 SOURCE: PCT Int. Appl., 25pp.
 CODEN: PIXXD2
 DOCUMENT TYPE: Patent
 LANGUAGE: English
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|---|------|-------------------|-----------------|------------|
| WO 2007017425 | A2 | 20070215 | WO 2006-EP64937 | 20060802 |
| WO 2007017425 | A3 | 20070405 | | |
| W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HN, HR, ID, IL, IN, IS, JP, KE, KG, KM, KN, KP, KR, KZ, LA, LC, LK, LR, LS, LT, LU, LV, LY, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RS, RU, SC, SD, SE, SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, ZA, ZM, ZW | | | | |
| RW: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, LV, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG, BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AP, EA, EP, OA | | | | |
| PRIORITY APPLN. INFO.: | | | EP 2005-107317 | A 20050809 |
| OTHER SOURCE(S): | | MARPAT 146:253562 | | |
| GI | | | | |

* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT *

AB Reactive dyes (I), wherein B = an aliphatic bridging member, R1 = C1-4 alkyl, halogen, or -SO₂-Z radical, R2-3 = C1-4 alkoxy, R4-6 = H, unsubstituted or substituted C1-4 alkyl, k, q = 0 or 1, p = 0, 1, 2, X1-2 = halogen, and T = halogen, a non-fiber-reactive substituent or fiber-reactive radicals, are suitable especially for dyeing cellulose-containing fibers or fabrics, especially

cotton fibers and fabrics. Thus, reactive dye II was synthesized from aniline-2,5-disulfonic acid, cyanuric fluoride, 1,2-propylenediamine, and compound III.

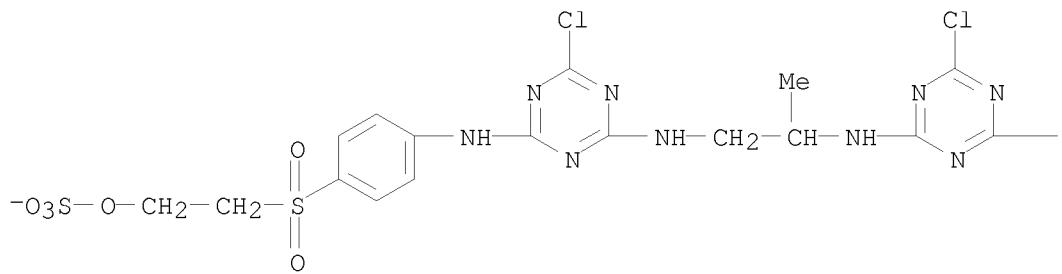
IT 925210-36-2P
 RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
 (preparation of azo reactive dyes for cotton fiber and fabric dyeing and printing)

RN 925210-36-2 CAPLUS

CN Cuprate(3-), [7-[[4-chloro-6-[[2-[[4-chloro-6-[[4-[[2-(sulfooxy)ethyl]sulfonyl]phenyl]amino]-1,3,5-triazin-2-yl]amino]-1-

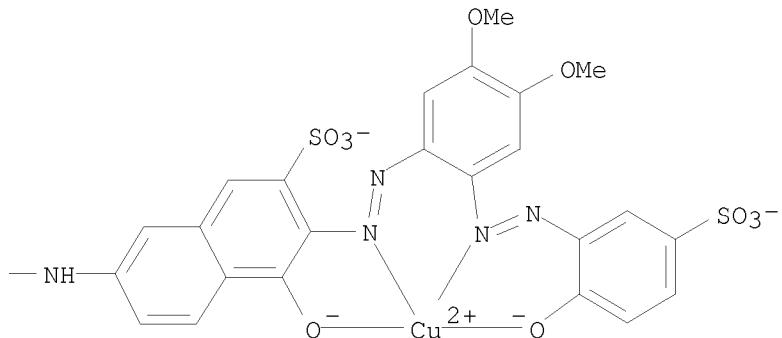
methylethyl]amino]-1,3,5-triazin-2-yl]amino]-4-(hydroxy- κ O)-3-[2-[2-[2-[2-(hydroxy- κ O)-5-sulfophenyl]diazenyl- κ N1]-4,5-dimethoxyphenyl]diazenyl- κ N1]-2-naphthalenesulfonato(5-)]-, hydrogen (1:3) (CA INDEX NAME)

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●3 H⁺

PAGE 1-B



L23 ANSWER 3 OF 17 CAPLUS COPYRIGHT 2008 ACS on STN
 ACCESSION NUMBER: 2005:570933 CAPLUS <<LOGINID::20080225>>
 DOCUMENT NUMBER: 143:98900
 TITLE: Reactive polysaccharide derivatives, their preparation and their use
 INVENTOR(S): Hall-Gouille, Veronique; Tzikas, Athanassios
 PATENT ASSIGNEE(S): Ciba Specialty Chemicals Holding Inc., Switz.
 SOURCE: PCT Int. Appl., 69 pp.
 CODEN: PIXXD2
 DOCUMENT TYPE: Patent
 LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|---|------|----------|------------------|------------|
| WO 2005058975 | A1 | 20050630 | WO 2004-EP53332 | 20041208 |
| W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW | | | | |
| RW: BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG | | | | |
| EP 1694713 | A1 | 20060830 | EP 2004-820464 | 20041208 |
| R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, FI, RO, CY, TR, BG, CZ, EE, HU, PL, SK, IS | | | | |
| CN 1894283 | A | 20070110 | CN 2004-80037220 | 20041208 |
| BR 2004017593 | A | 20070320 | BR 2004-17593 | 20041208 |
| US 2007113356 | A1 | 20070524 | US 2006-583012 | 20060615 |
| IN 2006CN02145 | A | 20070706 | IN 2006-CN2145 | 20060616 |
| PRIORITY APPLN. INFO.: | | | EP 2003-104773 | A 20031218 |
| | | | WO 2004-EP53332 | W 20041208 |

OTHER SOURCE(S): MARPAT 143:98900

AB A reactive polysaccharide derivative of $(HO)mPS[N(Q1)BAZ1]n$ or $(HO)mPS[N(Q3)Z2]n$ (A = O, S, N(Q2); Q1 = H, radical-BAZ1, optionally substituted C1-10 aryl, C1-12 alkyl which may be interrupted by O and is unsubstituted or substituted; Q2, Q3 = H, optionally substituted C1-10 aryl, C1-12 alkyl which may be interrupted by O and is unsubstituted or substituted; B = aliphatic or aromatic bridge; Z1, Z2 = reactive radical of the vinylsulfonyl series, the haloacryloyl series or the heterocyclic series; PS = polysaccharide radical; m = 0, 1 or an integer greater than 1; n = 1 or an integer greater than 1; the sum of n+m corresponds to the original number of HO groups in the polysaccharide mol.) is useful as a finishing agent for textile fibers and for other applications. Mono(6-O-p-toluenesulfonyl)- β -cyclodextrin was modified with N-ethylmethylenediamine to give a derivative for textile finishing.

IT 856428-47-2P 856428-52-9P 856428-54-1P
856428-55-2P 856428-57-4P

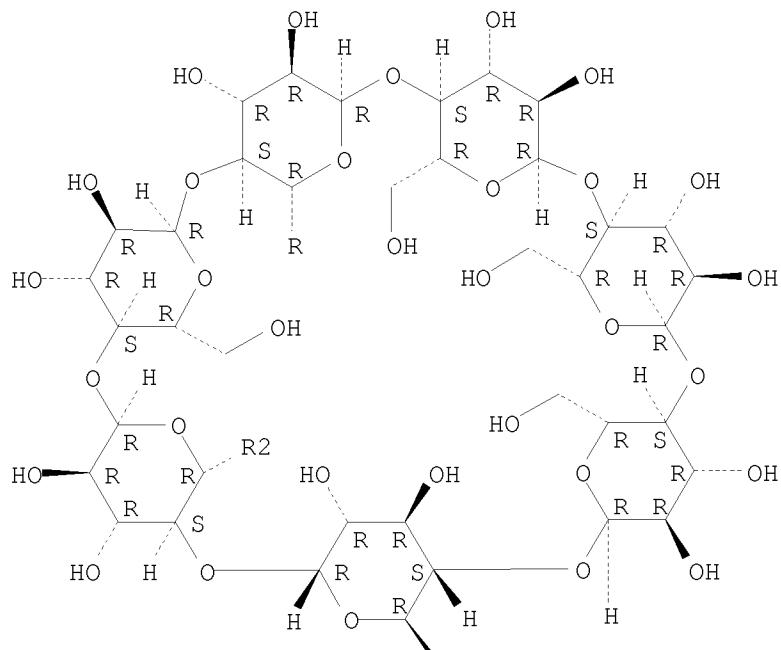
RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(manufacture of reactive polysaccharide derivs. for finishing fabrics)

RN 856428-47-2 CAPLUS

CN β -Cyclodextrin, 6A-[2-[[4-chloro-6-[[4-[[2-(sulfoxy)ethyl]sulfonyl]phenyl]amino]-1,3,5-triazin-2-yl]ethylamino]ethyl]amino]-6A-deoxy- (9CI) (CA INDEX NAME)

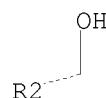
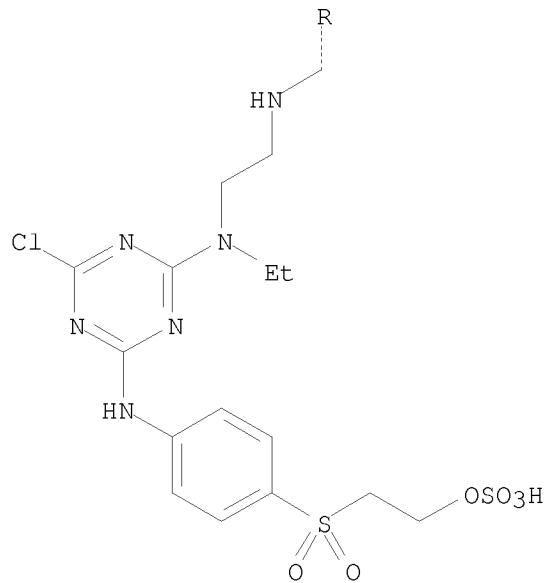
Absolute stereochemistry.

PAGE 1-A



PAGE 2-A

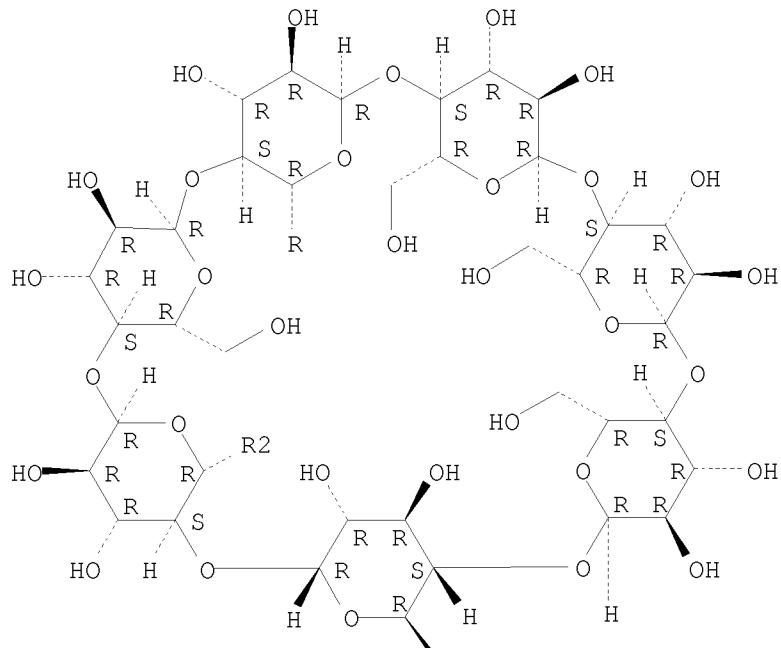




RN 856428-52-9 CAPLUS
 CN β -Cyclodextrin, 6A-deoxy-6A-[[2-[ethyl[4-fluoro-6-[[4-[[2-(sulfoxy)ethyl]sulfonyl]phenyl]amino]-1,3,5-triazin-2-yl]amino]ethyl]amino]- (9CI) (CA INDEX NAME)

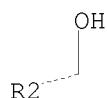
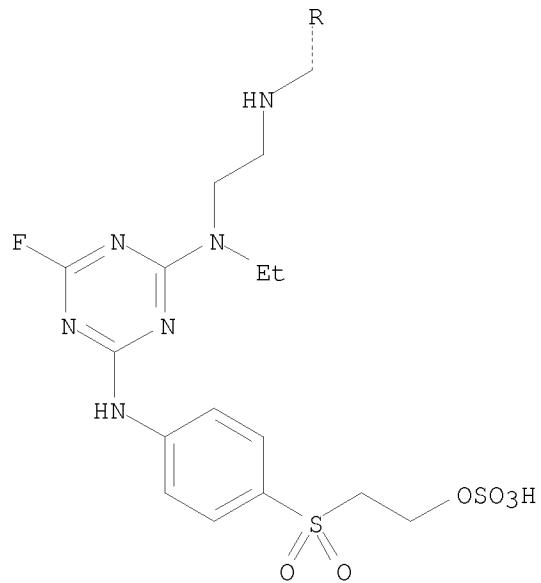
Absolute stereochemistry.

PAGE 1-A



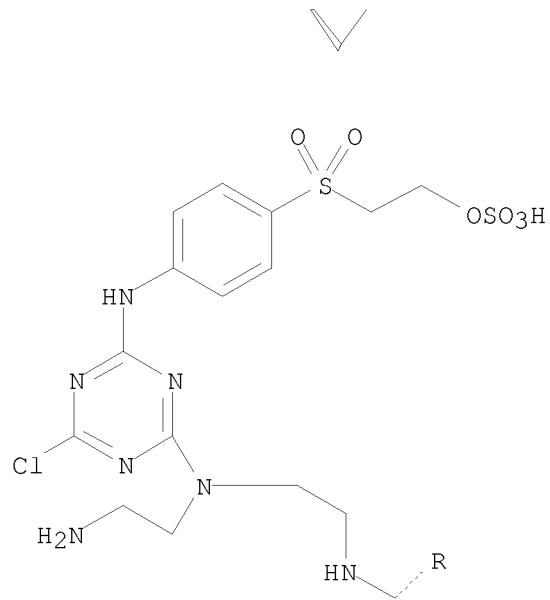
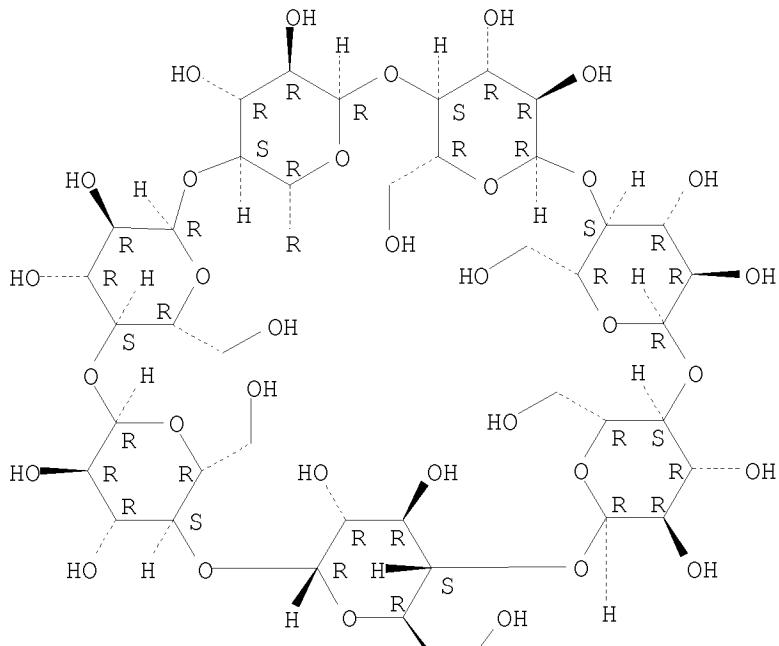
PAGE 2-A





RN 856428-54-1 CAPLUS
 CN β -Cyclodextrin, 6A-[[2-[(2-aminoethyl)[4-chloro-6-[(4-[(2-(sulfoxy)ethyl)sulfonyl]phenyl)amino]-1,3,5-triazin-2-yl]amino]ethyl]amino]-6A-deoxy- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

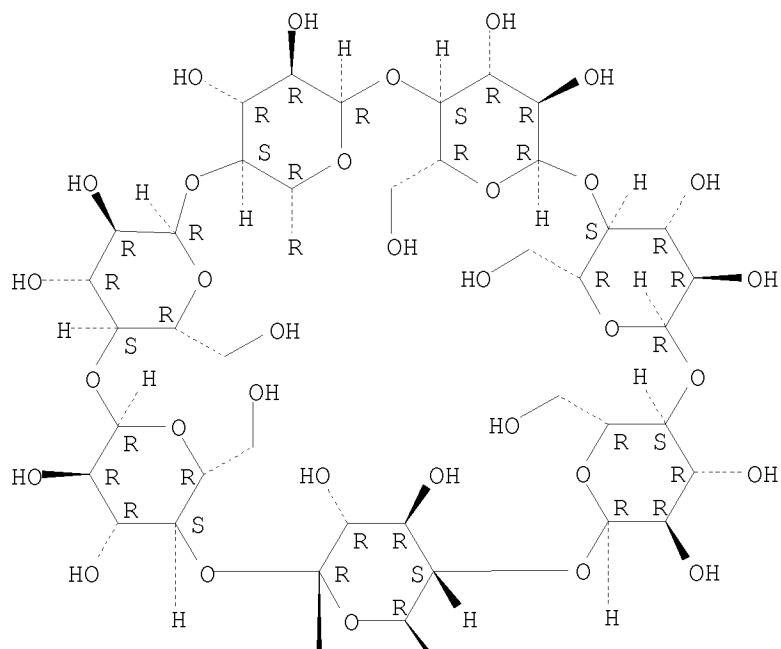


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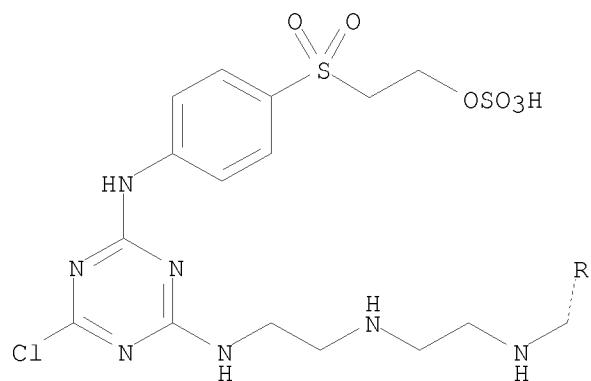
CN β -Cyclodextrin, 6A-[2-[2-[4-chloro-6-[4-[2-(sulfoxy)ethyl]sulfonyl]phenyl]amino]-1,3,5-triazin-2-yl]amino]ethyl]amino]ethyl]amino]-6A-deoxy- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

PAGE 1-A



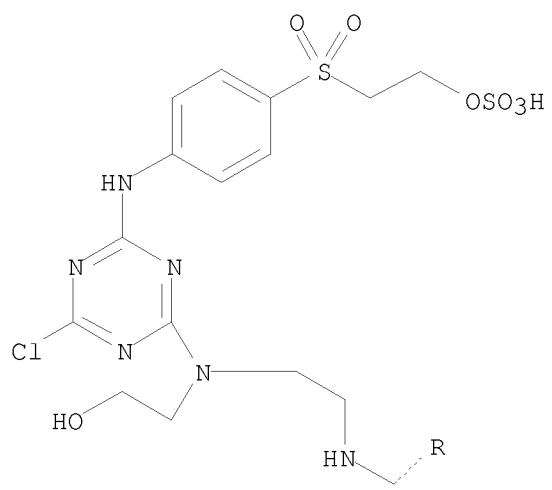
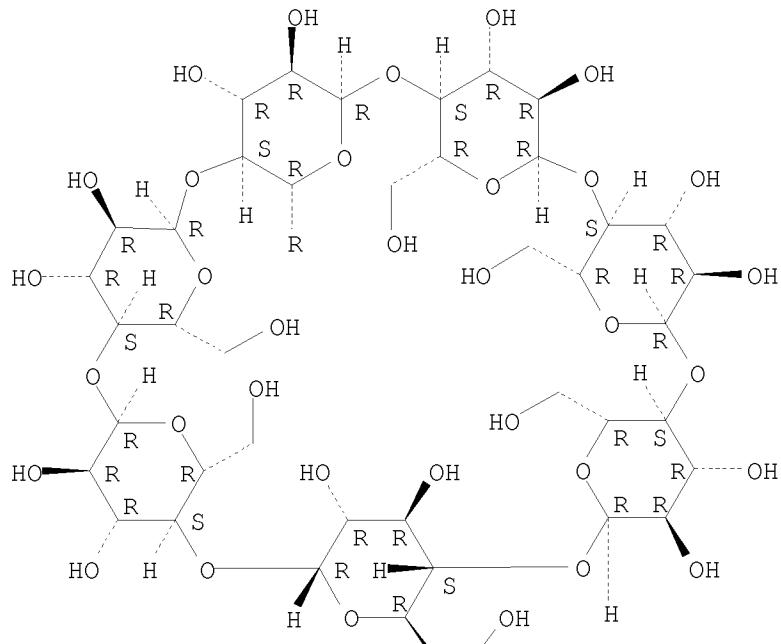
PAGE 2-A



RN 856428-57-4 CAPLUS

CN β -Cyclodextrin, 6A-[2-[4-chloro-6-[4-[2-(sulfooxy)ethyl]sulfonyl]phenyl]amino]-1,3,5-triazin-2-yl](2-hydroxyethyl)amino]ethyl]amino]-6A-deoxy- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



REFERENCE COUNT: 4 THERE ARE 4 CITED REFERENCES AVAILABLE FOR THIS
RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L23 ANSWER 4 OF 17 CAPLUS COPYRIGHT 2008 ACS on STN

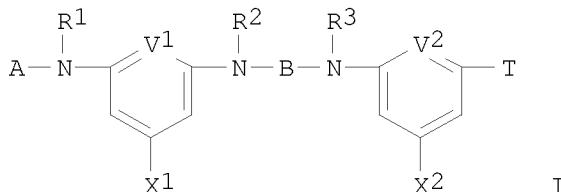
ACCESSION NUMBER: 2002:51717 CAPLUS <<LOGINID::20080225>>

DOCUMENT NUMBER: 136:119798

TITLE: Printing cellulosic fiber materials without an additional fixing process step
 INVENTOR(S): Tzikas, Athanassios; Reichert, Hans; Klier, Herbert
 PATENT ASSIGNEE(S): Ciba Specialty Chemicals Holding Inc., Switz.
 SOURCE: PCT Int. Appl., 54 pp.
 CODEN: PIXXD2
 DOCUMENT TYPE: Patent
 LANGUAGE: English
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|---|------|----------|------------------|-------------|
| WO 2002004741 | A1 | 20020117 | WO 2001-EP7362 | 20010628 |
| W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, UZ, VN, YU, ZA, ZW | | | | |
| RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG | | | | |
| TW 243842 | B | 20051121 | TW 2001-90114810 | 20010619 |
| EP 1299594 | A1 | 20030409 | EP 2001-953180 | 20010628 |
| R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR | | | | |
| JP 2004502886 | T | 20040129 | JP 2002-509589 | 20010628 |
| CN 1660942 | A | 20050831 | CN 2005-10054704 | 20010628 |
| US 2002032318 | A1 | 20020314 | US 2001-899439 | 20010705 |
| US 6623533 | B2 | 20030923 | | |
| US 2004055098 | A1 | 20040325 | US 2003-618922 | 20030714 |
| US 6953845 | B2 | 20051011 | | |
| PRIORITY APPLN. INFO.: | | | EP 2000-810594 | A 20000707 |
| | | | CN 2001-812474 | A3 20010628 |
| | | | WO 2001-EP7362 | W 20010628 |
| | | | US 2001-899439 | A3 20010705 |

OTHER SOURCE(S): MARPAT 136:119798
 GI



AB Printing cellulosic fiber materials comprises fiber material brought into contact with reactive dyes I, where A is the radical of a monoazo, polyazo, metal complex azo, anthraquinone, phthalocyanine, formazan or dioxazine chromophore, R1, R2 and R3 = H or unsubstituted or substituted C1-4-alkyl, X1 and X2 = halogen, B is an organic bridging member, T is a reactive radical, R4 = H, C1-4-alkyl unsubstituted or substituted by hydroxy, sulfo, sulfato, carboxy or by CN, or a radical alkR5SO2Y, where

R5 = is H, OH, sulfo, sulfato, carboxy, CN, halogen, C1-C4alkoxycarbonyl, C1-C4alkanoyloxy, carbamoyl or SO₂Y, R6 = H or C1-C4alkyl, alk and alk1 are linear or branched C1-C6alkylene, arylene is an unsubstituted or sulfo, carboxy, OH, C1-C4alkyl, C1-C4alkoxy- or halo-substituted phenylene or naphthylene radical, Y = vinyl or a radical CH₂CH₂U and U is a leaving group, Y1 = CH(Hal)CH₂(Hal) or C(Hal)=CH₂, where Hal is Cl or Br, W = SO₂NR₆, CONR₆ or NR₆CO, Q = O or NR₆, n = 0 or 1, and V₁ and V₂ = N, CH, CCl or CF. The prints obtained are distinguished by brilliant color shades and good all around properties.

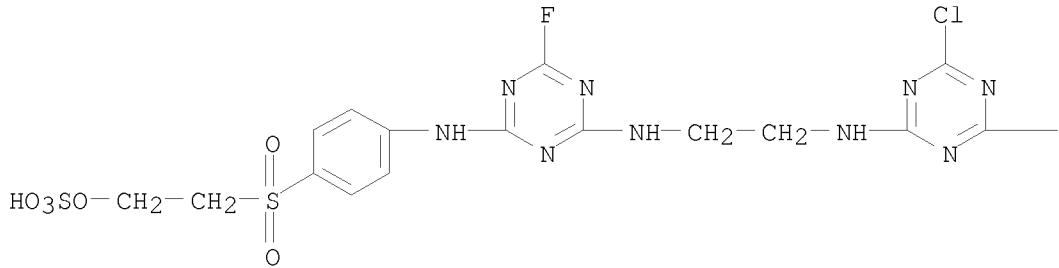
IT 390368-45-3P

RL: IMF (Industrial manufacture); PEP (Physical, engineering or chemical process); PYP (Physical process); TEM (Technical or engineered material use); PREP (Preparation); PROC (Process); USES (Uses)
(dyeing by; reactive dye printing cellulosic materials without addnl. fixing process step)

RN 390368-45-3 CAPLUS

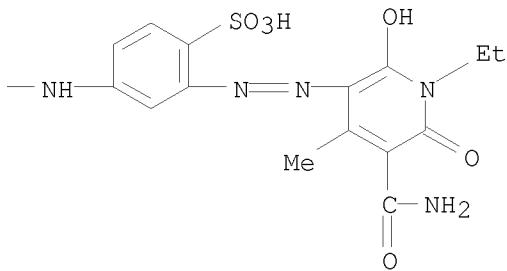
CN Benzenesulfonic acid, 2-[[5-(aminocarbonyl)-1-ethyl-1,6-dihydro-2-hydroxy-4-methyl-6-oxo-3-pyridinyl]azo]-4-[[4-chloro-6-[[2-[[4-fluoro-6-[[4-[[2-yl]amino]methylethyl]amino]-1,3,5-triazin-2-yl]amino]methylethyl]amino]-1,3,5-triazin-2-yl]amino]- (9CI) (CA INDEX NAME)

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D1—Me

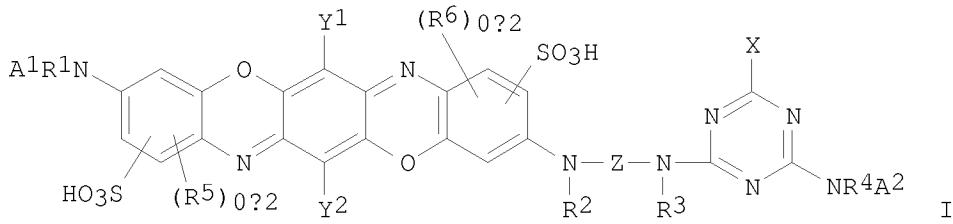
PAGE 1-B



REFERENCE COUNT: 6 THERE ARE 6 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L23 ANSWER 5 OF 17 CAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 2000:665629 CAPLUS <<LOGINID::20080225>>
DOCUMENT NUMBER: 133:239370
TITLE: Triphenodioxazine reactive dyes, their production and
their use
INVENTOR(S): Reichert, Hans; Verdugo, Thomas
PATENT ASSIGNEE(S): Ciba Specialty Chemicals Holding Inc., Switz.
SOURCE: Eur. Pat. Appl., 46 pp.
CODEN: EPXXDW
DOCUMENT TYPE: Patent
LANGUAGE: German
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|--|-------------------|----------|------------------|------------|
| EP 1036825 | A1 | 20000920 | EP 2000-810188 | 20000307 |
| EP 1036825 | B1 | 20040506 | | |
| R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO | | | | |
| TW 506993 | B | 20021021 | TW 2000-89102970 | 20000221 |
| AT 266061 | T | 20040515 | AT 2000-810188 | 20000307 |
| ES 2219289 | T3 | 20041201 | ES 2000-810188 | 20000307 |
| US 6592634 | B1 | 20030715 | US 2000-521711 | 20000309 |
| CN 1266870 | A | 20000920 | CN 2000-104094 | 20000314 |
| JP 2000281921 | A | 20001010 | JP 2000-71448 | 20000315 |
| HK 1029133 | A1 | 20050114 | HK 2000-108516 | 20001228 |
| PRIORITY APPLN. INFO.: | | | EP 1999-810229 | A 19990315 |
| OTHER SOURCE(S): | MARPAT 133:239370 | | | |
| GI | | | | |



AB The reactive dyes (I; R1-R4 = H, optionally substituted C1-4-alkyl; R5, R6 = halogen, carboxy, sulfo, carbamoyl, organic group; A1 = H, optionally substituted C1-4-alkyl, optionally substituted Ph or naphthyl; A2 = fiber-reactive group-substituted alkyl, aryl, heterocyclic moiety; Y1, Y2 = H, halogen, organic group; Z = aliphatic or aromatic connecting group) with good fastness, color yield, and application (no alkaline aftertreatment required) properties are obtained from the requisite p-phenylenediamines, benzoquinones, and halotriazines. Thus, 2,3,5-trichloro-6-methoxy-1,4-benzoquinone was condensed with 5-amino-2-(2-hydroxyethylamino)benzenesulfonic acid and the orange product was further treated with 5-amino-2-(2-aminopropylamino)benzenesulfonic acid. Cyclization of the product followed by condensation with cyanuric chloride and

4-(2-sulfatoethylsulfonyl)aniline gave a brilliant blue dye with a chlorotriazine and 2 vinyl sulfone-generating groups, having good fastness properties on cotton.

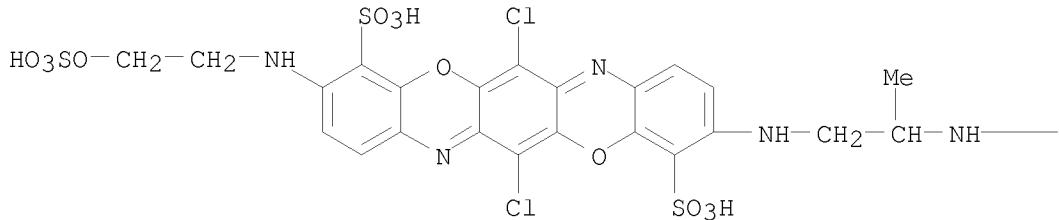
IT 293756-03-3P 293756-04-4P

RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(blue dye; production of reactive triphenodioxazine dyes)

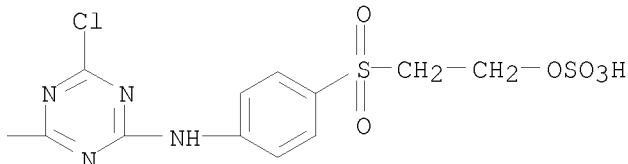
RN 293756-03-3 CAPLUS

CN 4,11-Triphenodioxazinedisulfonic acid, 6,13-dichloro-3-[(2-[(4-chloro-6-[[4-[(2-(sulfoxy)ethyl)sulfonyl]phenyl]amino]-1,3,5-triazin-2-yl]amino)propyl]amino]-10-[(2-(sulfoxy)ethyl)amino]- (CA INDEX NAME)

PAGE 1-A



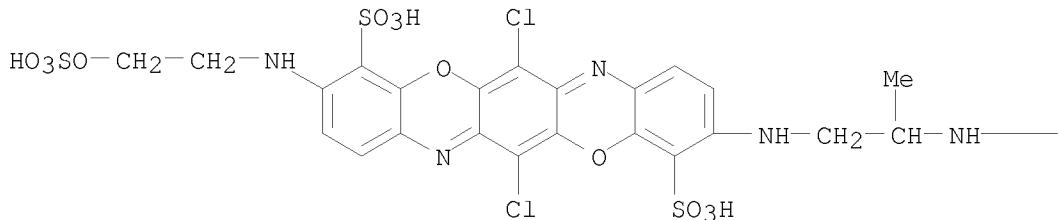
PAGE 1-B

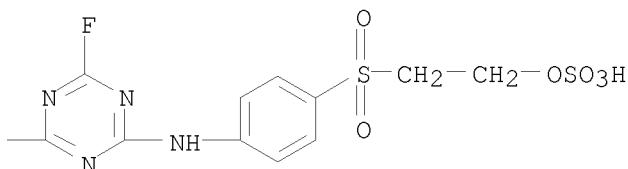


RN 293756-04-4 CAPLUS

CN 4,11-Triphenodioxazinedisulfonic acid, 6,13-dichloro-3-[[2-[[4-fluoro-6-[[4-[[2-(sulfooxy)ethyl]sulfonyl]phenyl]amino]-1,3,5-triazin-2-yl]amino]propyl]amino]-10-[[2-(sulfooxy)ethyl]amino]- (CA INDEX NAME)

PAGE 1-A

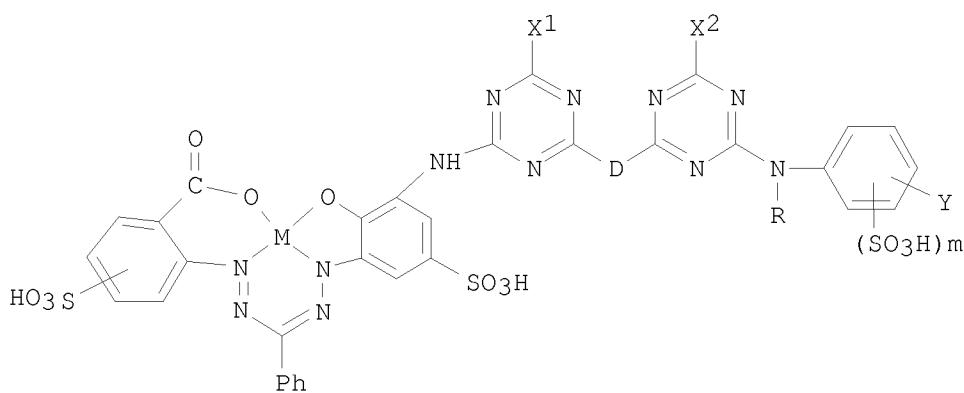




REFERENCE COUNT: 5 THERE ARE 5 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L23 ANSWER 6 OF 17 CAPLUS COPYRIGHT 2008 ACS on STN
 ACCESSION NUMBER: 1999:505688 CAPLUS <<LOGINID::20080225>>
 DOCUMENT NUMBER: 131:145686
 TITLE: Multifunctional reactive blue formazan dyes
 INVENTOR(S): Phillips, Duncan Adrian Sidney; Taylor, John Anthony;
 Chen, Wen-Jang
 PATENT ASSIGNEE(S): Everlight USA, Inc., USA
 SOURCE: U.S., 19 pp.
 CODEN: USXXAM
 DOCUMENT TYPE: Patent
 LANGUAGE: English
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|------------------------|--------|------------|-----------------|----------|
| US 5936073 | A | 19990810 | US 1998-205353 | 19981204 |
| PRIORITY APPLN. INFO.: | | | US 1998-205353 | 19981204 |
| OTHER SOURCE(S): | MARPAT | 131:145686 | | |
| GI | | | | |



I

AB The dyes have the formula I [D = NH(CH₂)_pNH, NR₁(CH₂)_qC₆H₄-n(SO₃H)_mNH; M = Cu, Ni; R, R₁ = H, C₁-4 alkyl; X₁, X₂ = F, Cl, Br, quaternary ammonium; Y = SO₂CH₂CH₂ or precursor, NHCOCT₂CH₂ or precursor; T = OH, Cl, Br, OSO₃H; m = 0, 1; p, q = 0-4]. These dyes have deep-dyeing ability, and are

suitable for dyeing and printing of materials containing cellulose fibers, such as cotton, synthetic cotton, hemp, and synthetic hemp.

IT 236386-99-5P 236387-00-1P

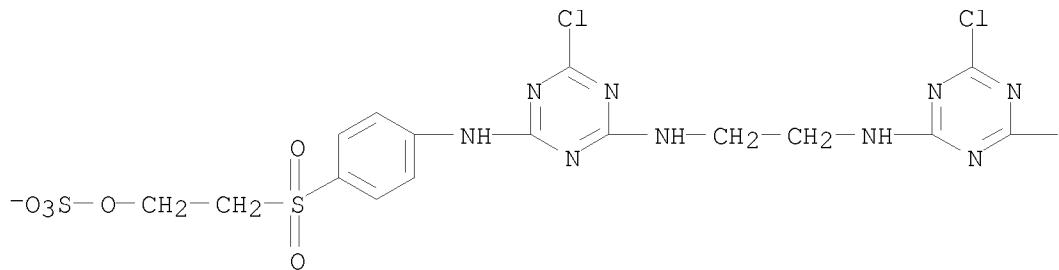
RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)

(blue; preparation of multifunctional reactive formazan dyes)

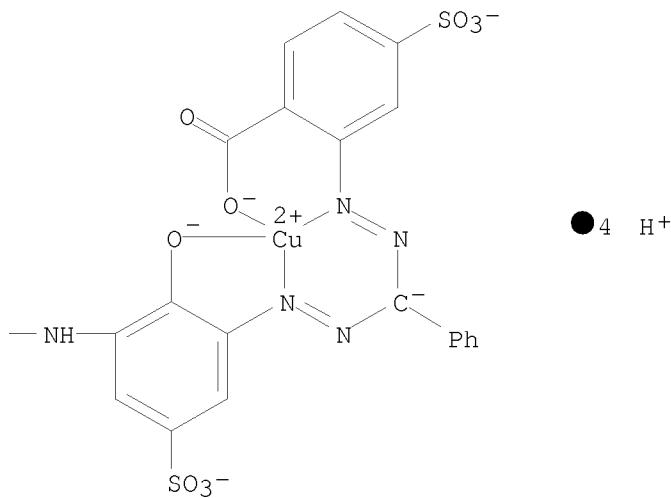
RN 236386-99-5 CAPLUS

CN Cuprate(4-), [2-[[[[3-[[4-chloro-6-[[2-[[4-chloro-6-[[4-[[2-
(sulfooxy)ethyl]sulfonyl]phenyl]amino]-1,3,5-triazin-2-
yl]amino]ethyl]amino]-1,3,5-triazin-2-yl]amino]-2-(hydroxy- κ O)-5-
sulfophenyl]azo- κ N2]phenylmethyl]azo- κ N1]-4-sulfobenzoato(6-)-
 κ O-, tetrahydrogen (9CI) (CA INDEX NAME)

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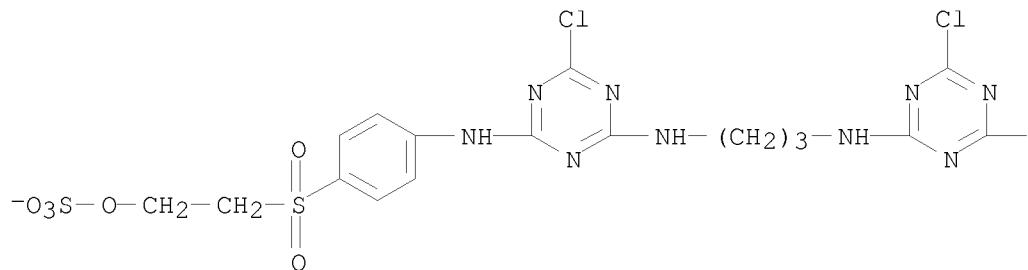
PAGE 1-B



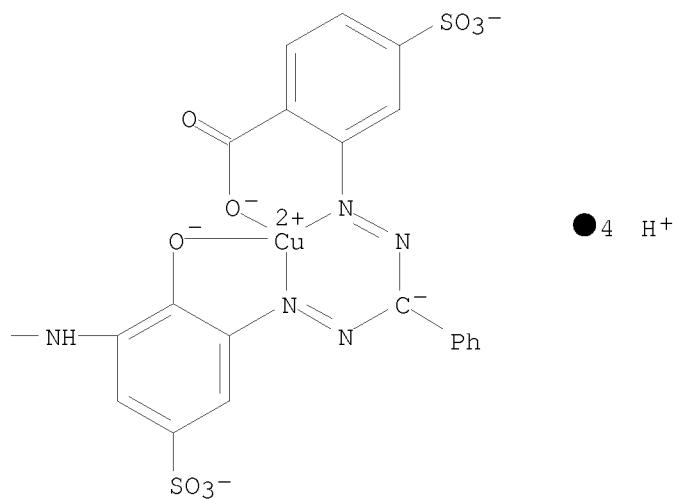
RN 236387-00-1 CAPLUS

CN Cuprate(4-), [2-[[[[3-[[4-chloro-6-[[3-[[4-chloro-6-[[4-[[2-
(sulfooxy)ethyl]sulfonyl]phenyl]amino]-1,3,5-triazin-2-
yl]amino]propyl]amino]-1,3,5-triazin-2-yl]amino]-2-(hydroxy- κ O)-5-
sulfophenyl]azo- κ N2]phenylmethyleazo- κ N1]-4-sulfobenzoato(6-)-
 κ O]-, tetrahydrogen (9CI) (CA INDEX NAME)

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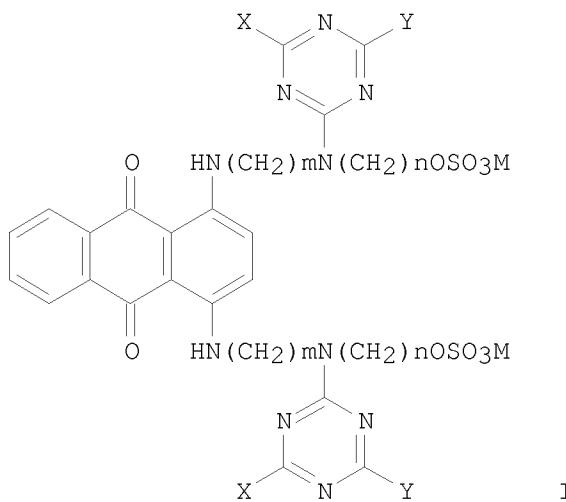


REFERENCE COUNT: 5 THERE ARE 5 CITED REFERENCES AVAILABLE FOR THIS
RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L23 ANSWER 7 OF 17 CAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 1997:433548 CAPLUS <<LOGINID::20080225>>
DOCUMENT NUMBER: 127:52211
TITLE: Reactive anthraquinone dyes, their preparation and
their use

INVENTOR(S): Reiher, Uwe; Russ, Werner Hubert; Brandl, Matthias
 PATENT ASSIGNEE(S): Hoechst A.-G., Germany
 SOURCE: Ger. Offen., 19 pp.
 CODEN: GWXXBX
 DOCUMENT TYPE: Patent
 LANGUAGE: German
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

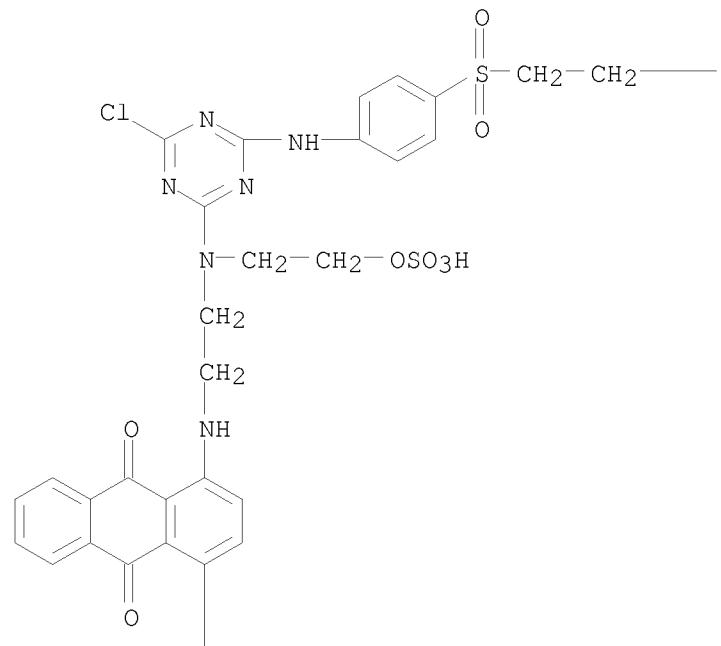
| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|------------------------|--------------------------------------|----------|------------------|----------|
| DE 19542749 | A1 | 19970522 | DE 1995-19542749 | 19951116 |
| PRIORITY APPLN. INFO.: | | | DE 1995-19542749 | 19951116 |
| OTHER SOURCE(S): | CASREACT 127:52211; MARPAT 127:52211 | | | |
| GI | | | | |



AB The dyes (I; M = H, alkali metal; X = Cl, F, optionally substituted alkoxy or amino; Y = Cl, F, amine-linked vinyl sulfone or aryl group; m, n = 1-3) are obtained from the appropriate 1,4-bis(sulfatoalkylaminoalkylamino)anthraquinones, halotriazines, and optional aromatic amine/vinyl sulfone precursors. I provide fast blue shades on fibrous substrates containing hydroxy or amide groups. In an example, 1,4-bis[2-(2-hydroxyethylamino)ethylamino]anthraquinone was sulfated and then treated with cyanuric chloride to give a reactive blue (λ_{max} 634 nm) dye with good fastness on cotton.

IT 191038-34-3P
 RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
 (preparation of reactive anthraquinone blue dyes for cotton)
RN 191038-34-3 CAPLUS
CN 9,10-Anthracenedione, 1,4-bis[[2-[[4-chloro-6-[[4-[[2-(sulfooxy)ethyl]sulfonyl]phenyl]amino]-1,3,5-triazin-2-yl][2-(sulfooxy)ethyl]amino]ethyl]amino]- (CA INDEX NAME)

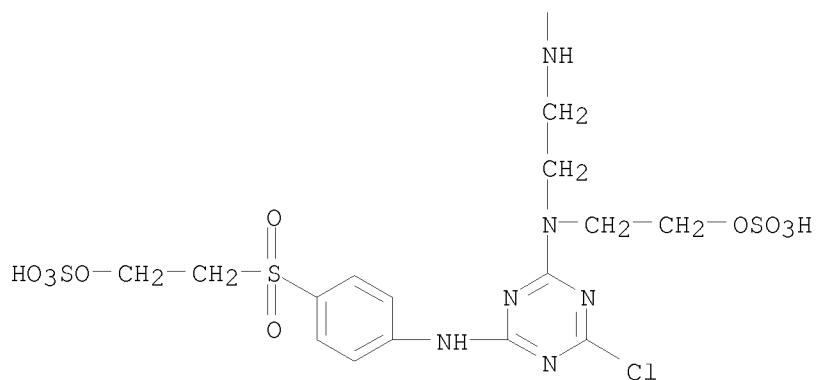
PAGE 1-A



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— OSO₃H

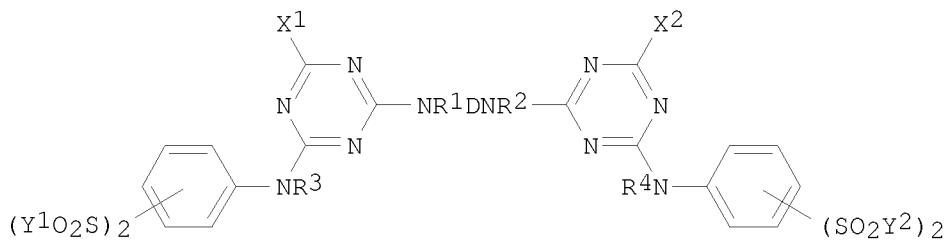
PAGE 2-A



L23 ANSWER 8 OF 17 CAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 1996:256277 CAPLUS <<LOGINID::20080225>>
DOCUMENT NUMBER: 124:319668
TITLE: Reactive triazine dyes and dyeing or printing of fibers with them

INVENTOR(S): Omura, Takashi
 PATENT ASSIGNEE(S): Sumitomo Chemical Co., Ltd., Japan
 SOURCE: Jpn. Kokai Tokkyo Koho, 10 pp.
 CODEN: JKXXAF
 DOCUMENT TYPE: Patent
 LANGUAGE: Japanese
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

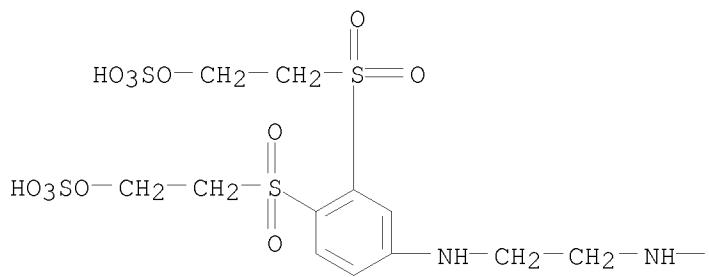
| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|------------------------|-------------------|----------|-----------------|----------|
| JP 08034932 | A | 19960206 | JP 1995-52447 | 19950313 |
| JP 2590778 | B2 | 19970312 | | |
| PRIORITY APPLN. INFO.: | | | JP 1995-52447 | 19950313 |
| OTHER SOURCE(S): | MARPAT 124:319668 | | | |
| GI | | | | |



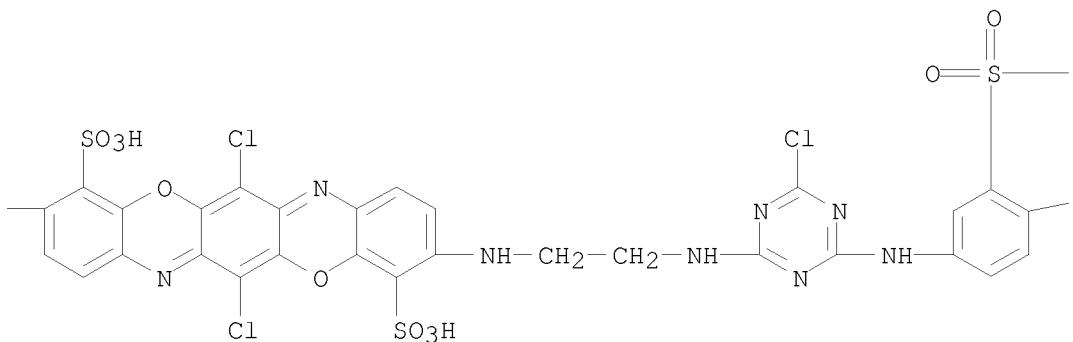
AB Triazines I [R1-4 = H, (un)substituted alkyl; X1-2 = Cl, F, (un)substituted aliphatic aromatic amino, C1-4 alkoxy, (un)substituted PhO; Y1-2 = (CH₂)₂L, vinyl; D = azo-, anthraquinone-, phthalocyanine-, formazan-, or dioxazine-type anionic dye residue; L = leaving group activated by alkali] are prepared and used for dyeing or printing of fibers, especially cotton, to give colored fibers with good fastness.

IT 176206-46-5
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (in preparation of reactive triazine dyes)
 RN 176206-46-5 CAPLUS
 CN 4,11-Triphenodioxazinedisulfonic acid, 3-[[2-[[4-[[3,4-bis[[2-yl]amino]ethyl]amino]-10-[[2-[[3,4-bis[[2-(sulfoxy)ethyl]sulfonyl]phenyl]amino]-6-chloro-1,3,5-triazin-2-yl]amino]ethyl]amino]-6,13-dichloro- (CA INDEX NAME)

PAGE 1-A

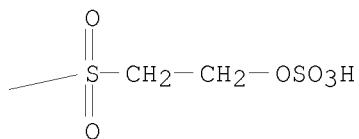


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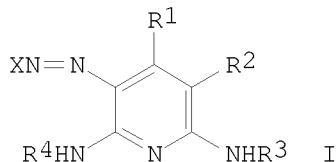
$-\text{CH}_2-\text{CH}_2-\text{OSO}_3\text{H}$



L23 ANSWER 9 OF 17 CAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 1994:511467 CAPLUS <<LOGINID::20080225>>
DOCUMENT NUMBER: 121:111467
TITLE: Reactive pyridyl azo dyes, their manufacture and their use
INVENTOR(S): Tzikas, Athanassios; Deitz, Rolf
PATENT ASSIGNEE(S): Ciba-Geigy A.-G., Switz.
SOURCE: Eur. Pat. Appl., 40 pp.

DOCUMENT TYPE: Patent
 LANGUAGE: German
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

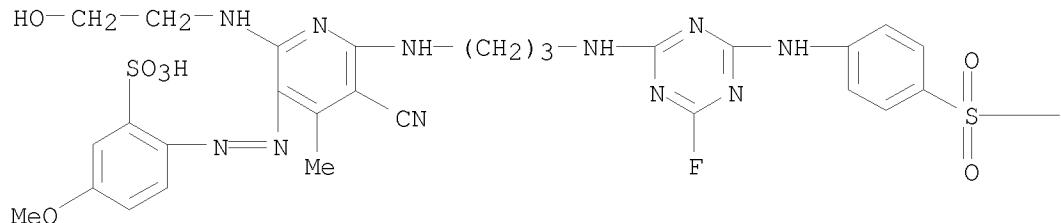
| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|---------------------------------------|------|----------|-----------------|--------------|
| EP 581731 | A2 | 19940202 | EP 1993-810505 | 19930714 |
| EP 581731 | A3 | 19941117 | | |
| EP 581731 | B1 | 19981209 | | |
| R: BE, CH, DE, ES, FR, GB, IT, LI, PT | | | | |
| ES 2126638 | T3 | 19990401 | ES 1993-810505 | 19930714 |
| US 5391717 | A | 19950221 | US 1993-94645 | 19930719 |
| JP 06179831 | A | 19940628 | JP 1993-181293 | 19930722 |
| JP 3739415 | B2 | 20060125 | | |
| PRIORITY APPLN. INFO.: | | | | CH 1992-2349 |
| OTHER SOURCE(S): MARPAT 121:111467 | | | | A 19920723 |
| GI | | | | |



AB The dyes (I; R1 = C1-4-alkyl; R2 = CN, carbamoyl, sulfomethyl; R3, R4 = H, optionally substituted alkyl; X = diazo component) have ≥ 2 fiber-reactive groups. The reactive groups may be on R3 or R4 or on X, in the form of halopyrimidine or halotriazine. At least one sulfo or sulfato group is also present. I are suitable for dyeing or printing of cellulosics or natural or synthetic polyamides with good fastness. Thus, 4-(2-sulfatoethylsulfonyl)aniline was condensed with cyanuric fluoride followed by a mixture of 2 pyridine azo dyes to provide a mixture of reactive dyes containing fluorotriazine and sulfatoethylsulfonyl groups. The mixture conferred a brilliant gold yellow shade on cotton and wool.

IT 155952-51-5P 155952-52-6P
 RL: IMF (Industrial manufacture); PREP (Preparation)
 (preparation of, as reactive dye for cotton and wool)
 RN 155952-51-5 CAPLUS
 CN Benzenesulfonic acid, 2-[[5-cyano-6-[[3-[[4-fluoro-6-[[4-[[2-
 (sulfoxy)ethyl]sulfonyl]phenyl]amino]-1,3,5-triazin-2-
 yl]amino]propyl]amino]-2-[(2-hydroxyethyl)amino]-4-methyl-3-pyridinyl]azo]-
 5-methoxy- (9CI) (CA INDEX NAME)

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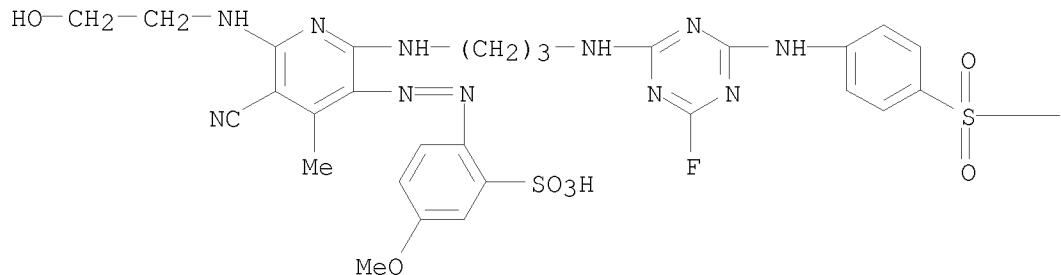
PAGE 1-B

— CH₂— CH₂— OSO₃H

RN 155952-52-6 CAPLUS

CN Benzenesulfonic acid, 2-[[5-cyano-2-[[3-[[4-fluoro-6-[[4-[[2-yl]amino]propyl]amino]-6-[(2-hydroxyethyl)amino]-4-methyl-3-pyridinyl]azo]-5-methoxy- (9CI) (CA INDEX NAME)

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— CH₂— CH₂— OSO₃H

L23 ANSWER 10 OF 17 CAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 1990:499387 CAPLUS <<LOGINID::20080225>>

DOCUMENT NUMBER: 113:99387

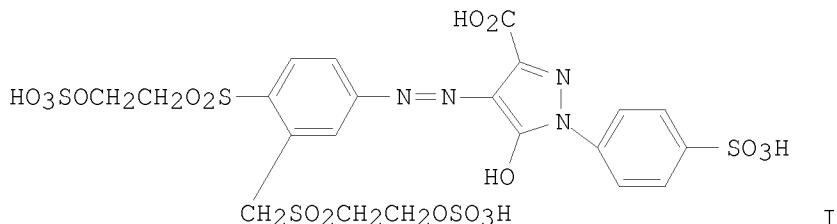
TITLE: Dyes having at least two fiber-reactive groups, and their intermediates

INVENTOR(S): Patsch, Manfred; Nahr, Uwe; Wirsing, Friedrich;

Jessen, Joerg L.; Pandl, Klaus; Marschner, Claus;
 Dust, Matthias
 PATENT ASSIGNEE(S): BASF A.-G., Germany
 SOURCE: Eur. Pat. Appl., 81 pp.
 CODEN: EPXXDW
 DOCUMENT TYPE: Patent
 LANGUAGE: German
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|---------------------------|------|----------|-----------------|-------------|
| EP 352682 | A2 | 19900131 | EP 1989-113540 | 19890722 |
| EP 352682 | A3 | 19901010 | | |
| EP 352682 | B1 | 19940202 | | |
| R: CH, DE, FR, GB, IT, LI | | | | |
| DE 3825656 | A1 | 19900322 | DE 1988-3825656 | 19880728 |
| JP 02073867 | A | 19900313 | JP 1989-194394 | 19890728 |
| US 5210187 | A | 19930511 | US 1992-865744 | 19920409 |
| PRIORITY APPLN. INFO.: | | | DE 1988-3825656 | A 19880728 |
| | | | US 1989-381941 | B1 19890719 |
| | | | US 1990-554860 | B1 19900720 |

OTHER SOURCE(S): CASREACT 113:99387; MARPAT 113:99387
 GI

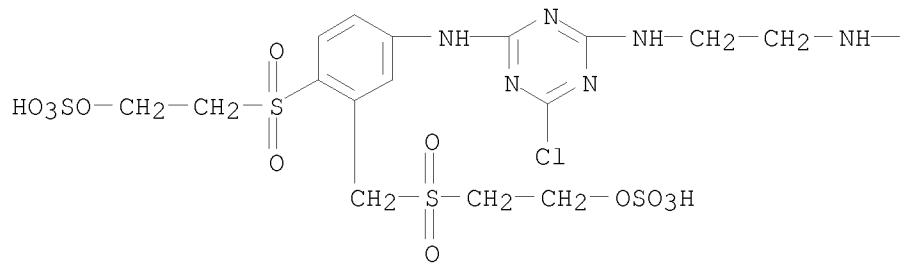


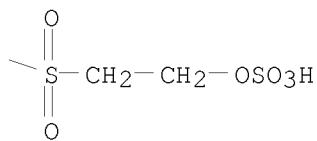
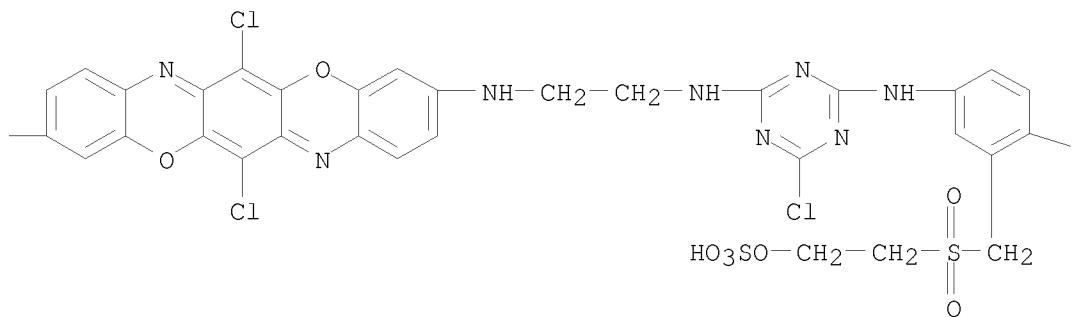
AB The dyes have a high color yield and are useful for dyeing hydroxyl group-containing fibers (e.g., cotton, wool). Thus, 4-(2-sulfatoethylsulfonyl)-3-(2-sulfatoethylsulfonylmethyl)aniline was diazotized and coupled with 1-(4-sulfophenyl)-3-carboxy-5-pyrazolone, forming I, which dyed cotton fast yellow shades.

IT 127303-98-4P
 RL: PREP (Preparation)
 (manufacture of, as reactive blue dye for cotton)

RN 127303-98-4 CAPLUS

CN Triphenodioxazinedisulfonic acid, 6,13-dichloro-3,10-bis[[2-[[4-chloro-6-[[4-[[2-(sulfoxy)ethyl]sulfonyl]-3-[[2-(sulfoxy)ethyl]sulfonyl]methyl]phenyl]amino]-1,3,5-triazin-2-yl]amino]ethyl]amino]- (9CI) (CA INDEX NAME)



$$2 \left[\text{D1} - \text{SO}_3\text{H} \right]$$


IT 127278-52-8P

RL: PREP (Preparation)

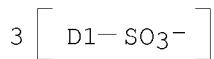
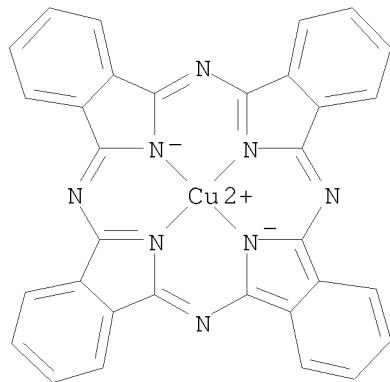
(manufacture of, as reactive turquoise dye for cotton)

RN 127278-52-8 CAPLUS

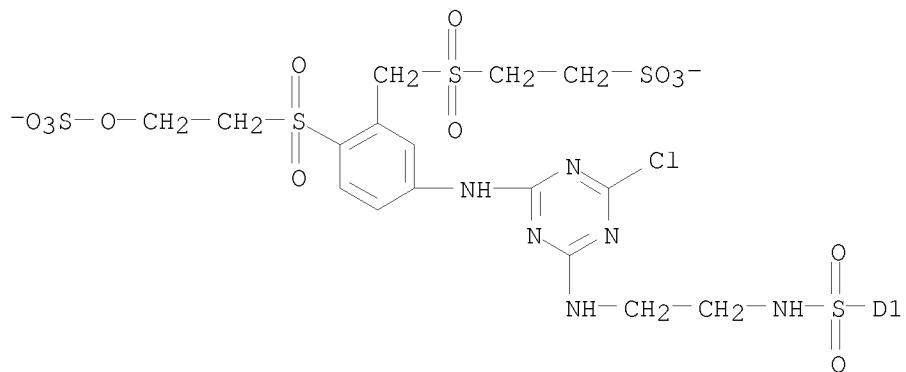
CN Cuprate(5-), [C-[[[2-[[4-chloro-6-[[4-[[2-(sulfoxy)ethyl]sulfonyl]-3-[[[2-(sulfoxy)ethyl]sulfonyl]methyl]phenyl]amino]-1,3,5-triazin-2-yl]amino]ethyl]amino]sulfonyl]-29H,31H-phthalocyanine-C,C,C-trisulfonato(7-

) -N29, N30, N31, N32]-, pentahydrogen (9CI) (CA INDEX NAME)

PAGE 1-A



PAGE 2-A

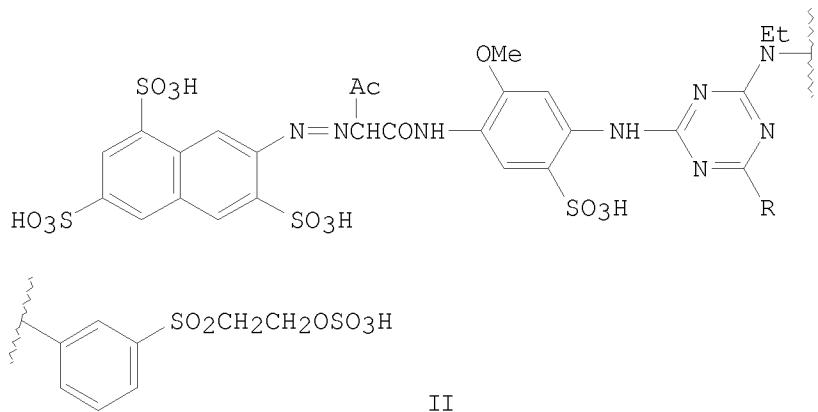
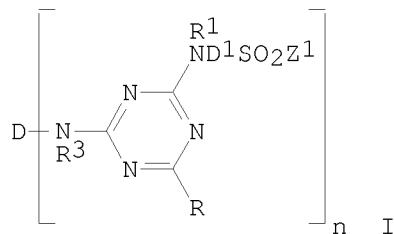


●5 H^+

L23 ANSWER 11 OF 17 CAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 1989:136910 CAPLUS <<LOGINID::20080225>>
DOCUMENT NUMBER: 110:136910
TITLE: Mixed reactive dye compositions and dyeing and
printing therewith
INVENTOR(S): Harada, Naoki; Omura, Takashi; Imada, Kunihiko
PATENT ASSIGNEE(S): Sumitomo Chemical Co., Ltd., Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 19 pp.
CODEN: JKXXAF

DOCUMENT TYPE: Patent
 LANGUAGE: Japanese
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|------------------------|------|-------------------|-----------------|----------|
| JP 63210170 | A | 19880831 | JP 1987-44616 | 19870226 |
| JP 08003050 | B | 19960117 | | |
| PRIORITY APPLN. INFO.: | | | JP 1987-44616 | 19870226 |
| OTHER SOURCE(S): | | MARPAT 110:136910 | | |
| GI | | | | |



AB The title compns., producing cotton dyeings with excellent leveling and reproducibility, contain ≥ 2 of I [D = sulfo group-containing organic dye residue; D1, D2 = (un)substituted phenylene, naphthylene; R = N(R₂)D₂SO₂Z₂; R₁, R₂, R₃, Z₁, Z₂ = vinyl, CH₂CH₂L; L = alkali-removable group; n = 1-3], I (R = Cl, F, Br, quaternary N atom-containing tertiary N compound residue), and I (R = NR₄R₅; R₄ = H, (un)substituted lower alkyl; R₅ = (un)substituted Ph, naphthyl; . A typical mixture producing level greenish-yellow cotton dyeing contained II (R = Cl) and II (R = m-NHC₆H₄SO₂CH₂CH₂OSO₃H) in a 1:1 ratio.

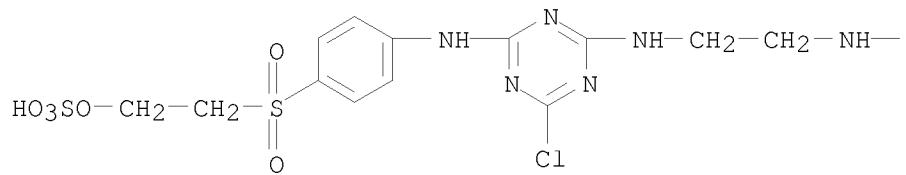
IT 119043-29-7 119636-56-5

RL: TEM (Technical or engineered material use); USES (Uses)
 (dye mixts. containing, with good reproducibility and leveling, for cotton)

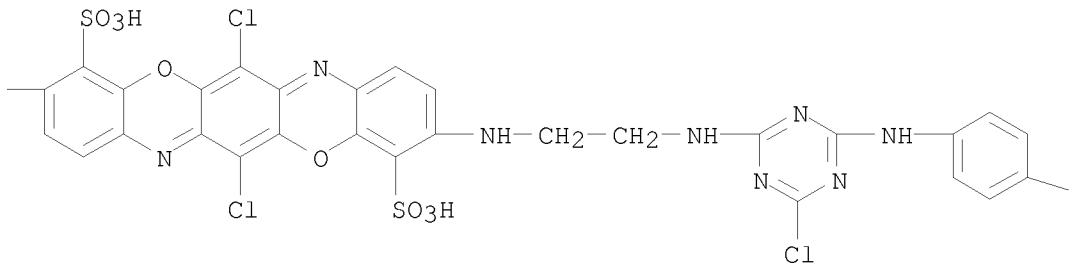
RN 119043-29-7 CAPLUS

CN 4,11-Triphenodioxazinedisulfonic acid, 6,13-dichloro-3,10-bis[[2-[[4-chloro-6-[[4-[[2-(sulfoxy)ethyl]sulfonyl]phenyl]amino]-1,3,5-triazin-2-yl]amino]ethyl]amino]- (CA INDEX NAME)

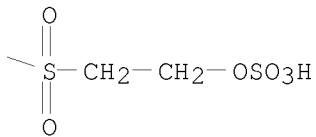
PAGE 1-A



PAGE 1-B

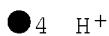
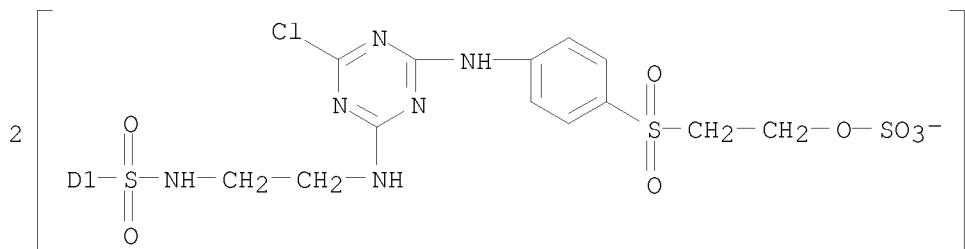
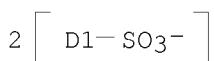
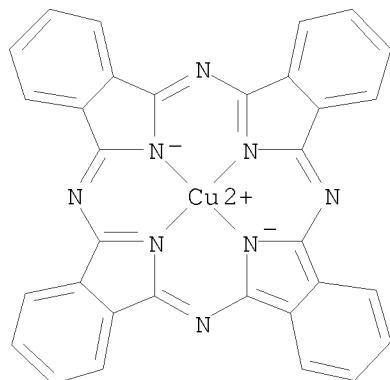


PAGE 1-C



RN 119636-56-5 CAPLUS

CN Cuprate(4-), [C,C-bis[[[2-[[4-chloro-6-[[4-[[2-(sulfoxy)ethyl]sulfonyl]phenyl]amino]-1,3,5-triazin-2-yl]amino]ethyl]amino]sulfonyl]-29H,31H-phthalocyanine-C,C-disulfonato(6-)]-, tetrahydrogen (9CI) (CA INDEX NAME)



L23 ANSWER 12 OF 17 CAPLUS COPYRIGHT 2008 ACS on STN
 ACCESSION NUMBER: 1988:592172 CAPLUS <<LOGINID::20080225>>
 DOCUMENT NUMBER: 109:192172
 TITLE: Triphenodioxazine reactive dyes and process for their manufacture
 INVENTOR(S): Sawamoto, Hirokazu; Harada, Naoki; Omura, Takashi
 PATENT ASSIGNEE(S): Sumitomo Chemical Co., Ltd., Japan
 SOURCE: Eur. Pat. Appl., 35 pp.
 CODEN: EPXXDW
 DOCUMENT TYPE: Patent
 LANGUAGE: English
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|------------|-------|-------|-----------------|-------|
| ----- | ----- | ----- | ----- | ----- |

| | | | | |
|---|----|----------|----------------|----------|
| EP 275022 | A2 | 19880720 | EP 1988-100062 | 19880105 |
| EP 275022 | A3 | 19890125 | | |
| EP 275022 | B1 | 19920506 | | |
| R: BE, CH, DE, ES, FR, GB, IT, LI, NL, SE | | | | |
| JP 63170463 | A | 19880714 | JP 1987-1372 | 19870107 |
| JP 07116376 | B | 19951213 | | |
| US 4933446 | A | 19900612 | US 1987-133605 | 19871216 |
| ES 2037110 | T3 | 19930616 | ES 1988-100062 | 19880105 |
| PRIORITY APPLN. INFO.: | | | | |
| OTHER SOURCE(S): MARPAT 109:192172 | | | | |
| GI | | | | |

* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT *

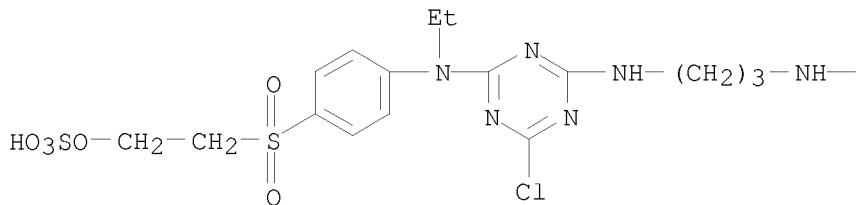
AB The title compds. I [Q = SO₃H, OH, halogen, alkoxy, (un)substituted PhO, NH₂; R = halogen, alkyl, alkoxy, SO₃H; V = direct bond, NR₃; R₃ = H, (un)substituted alkyl; X = direct bond, divalent aliphatic, divalent alicyclic, divalent arylaliph., divalent aromatic bridging group; Y = (un)substituted phenylene, (un)substituted naphthylene; Z = SO₂CH:CH₂, SO₂CH₂CH₂Z₁; Z₁ = alkali-cleavable substituent], useful for dyeing or printing hydroxyl or amide group-containing textiles, are prepared 1,4-Diamino-2-methoxy-5-benzenesulfonic acid was condensed with chloranil, and the condensate cyclocondensed in the presence of 28% oleum to produce a diamino-substituted triphenodioxazine intermediate, which was condensed with cyanuric chloride, and the dichlorotriazine group-containing intermediate condensed with 1-aminobenzene-3-β-sulfatoethylsulfone, forming II, λ_{max} 600 nm, which dyed cotton in a fast red-blue shade.

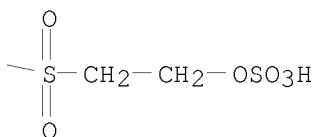
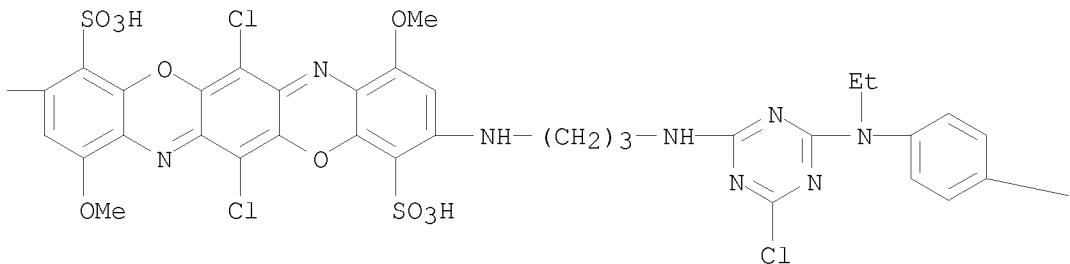
IT 117331-43-8P
 RL: PREP (Preparation)
 (manufacture of, as blue reactive dye)

RN 117331-43-8 CAPLUS

CN 4,11-Triphenodioxazinedisulfonic acid, 6,13-dichloro-3,10-bis[[3-[[4-chloro-6-[ethyl[4-[[2-(sulfoxy)ethyl]sulfonyl]phenyl]amino]-1,3,5-triazin-2-yl]amino]propyl]amino]-1,8-dimethoxy- (9CI) (CA INDEX NAME)

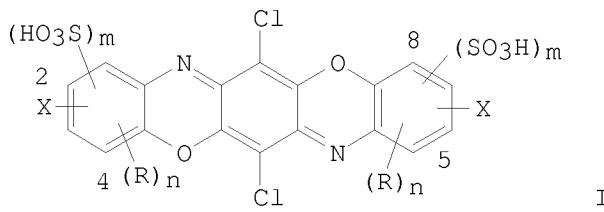
PAGE 1-A



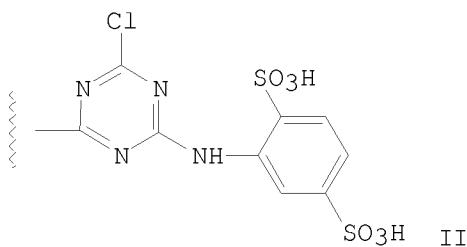
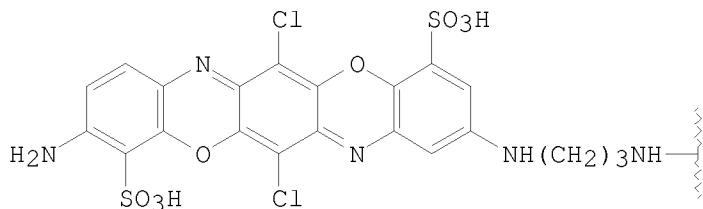


L23 ANSWER 13 OF 17 CAPLUS COPYRIGHT 2008 ACS on STN
 ACCESSION NUMBER: 1988:456575 CAPLUS <<LOGINID::20080225>>
 DOCUMENT NUMBER: 109:56575
 TITLE: Triphenodioxazine reactive dyes, their preparation and use
 INVENTOR(S): Seitz, Karl
 PATENT ASSIGNEE(S): Ciba-Geigy A.-G., Switz.
 SOURCE: Eur. Pat. Appl., 15 pp.
 CODEN: EPXXDW
 DOCUMENT TYPE: Patent
 LANGUAGE: German
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|-------------------------------|--------|-----------|-----------------|------------|
| EP 260227 | A1 | 19880316 | EP 1987-810514 | 19870907 |
| EP 260227 | B1 | 19910116 | | |
| R: BE, CH, DE, FR, GB, IT, LI | | | | |
| US 4841049 | A | 19890620 | US 1987-92798 | 19870903 |
| JP 63075066 | A | 19880405 | JP 1987-225445 | 19870910 |
| JP 2512493 | B2 | 19960703 | | |
| PRIORITY APPLN. INFO.: | | | CH 1986-3666 | A 19860912 |
| OTHER SOURCE(S): | MARPAT | 109:56575 | | |
| GI | | | | |



I



AB The title compds. I [R = C1-4 alkyl, C1-4 alkoxy, halogen, carboxy, carbamoyl, N-(C1-4 alkyl)carbamoyl, N,N-(di-C1-4-alkyl)carbamoyl, C1-4 alkylsulfonyl, sulfamoyl, N-(C1-4 alkyl)sulfamoyl, N,N-(di-C1-4-alkyl)sulfamoyl; one X is H2N and the other is -N(R1)AN(R2)Y; A = (un)substituted C2-4 alkylene, (un)substituted cyclohexylene; R1, R2 = H, (un)substituted C1-4 alkyl; Y = fiber-reactive residue; m = 1, 2; n = 0-2], useful for dyeing or printing of cellulosic fibers, are prepared I [X = 3-NH2, 7-NH(CH2)3NH2, m = 1 (positions 4 and 8); n = 0] was condensed with a dichlorotriazine-containing condensation product prepared from the reaction of equimolar amts. of cyanuric chloride and aniline-2,5-disulfonic acid, forming II, having λ_{max} 616 nm, which dyed cotton in a pure blue shade.

IT 115499-02-0P

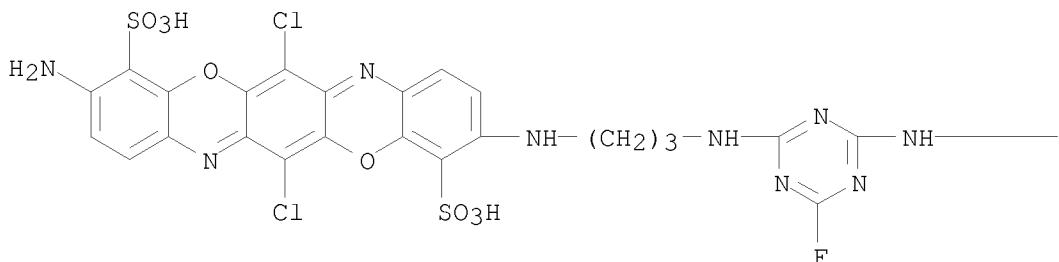
RL: PREP (Preparation)

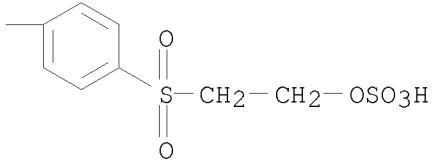
(manufacture of, as reactive dye for cellulosic fibers)

RN 115499-02-0 CAPLUS

CN 4,11-Triphenodioxazinedisulfonic acid, 3-amino-6,13-dichloro-10-[[3-[[4-fluoro-6-[[4-[[2-(sulfoxy)ethyl]sulfonyl]phenyl]amino]-1,3,5-triazin-2-yl]amino]propyl]amino]- (CA INDEX NAME)

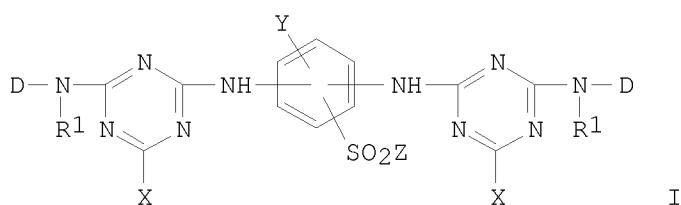
PAGE 1-A





L23 ANSWER 14 OF 17 CAPLUS COPYRIGHT 2008 ACS on STN
 ACCESSION NUMBER: 1987:638574 CAPLUS <<LOGINID::20080225>>
 DOCUMENT NUMBER: 107:238574
 TITLE: Reactive dyes for cotton
 INVENTOR(S): Kato, Yoshiaki
 PATENT ASSIGNEE(S): Mitsubishi Chemical Industries Co., Ltd., Japan
 SOURCE: Jpn. Kokai Tokkyo Koho, 13 pp.
 CODEN: JKXXAF
 DOCUMENT TYPE: Patent
 LANGUAGE: Japanese
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|------------------------|------|----------|-----------------|----------|
| JP 62172062 | A | 19870729 | JP 1986-13375 | 19860124 |
| JP 06062873 | B | 19940817 | | |
| PRIORITY APPLN. INFO.: | | | JP 1986-13375 | 19860124 |
| GI | | | | |

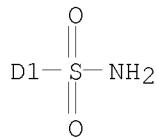
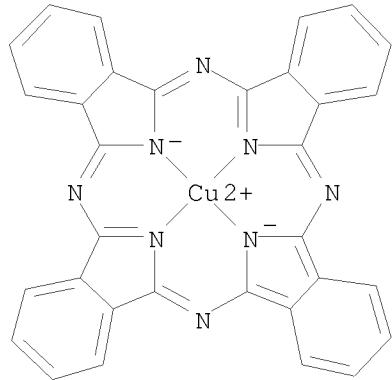


AB The title dyes were prepared having the general formula I [D = monoazo, polyazo, metal-containing azo, anthraquinone, phthalocyanine, formazan dye residue; R1 = H, (un)substituted alkyl; X = halogen; Y = H, halogen, (un)substituted alkyl; Z = CH:CH2, CH2CH2OSO3H]. 3,5-(H2N)2C6H3SO2CH2CH2OSO3H was condensed 1:2 (molar) with 2-[4-(2,4-dichloro-s-triazin-6-ylamino)-2-methylphenylazo]naphthalene-4,8-disulfonic acid and salted to give the corresponding I, yellow on cotton. The dyes prepared can be used with disperse dyes in 1-bath-1-step dyeing of polyester-cotton blends.

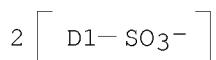
IT 111611-61-1
 RL: TEM (Technical or engineered material use); USES (Uses)

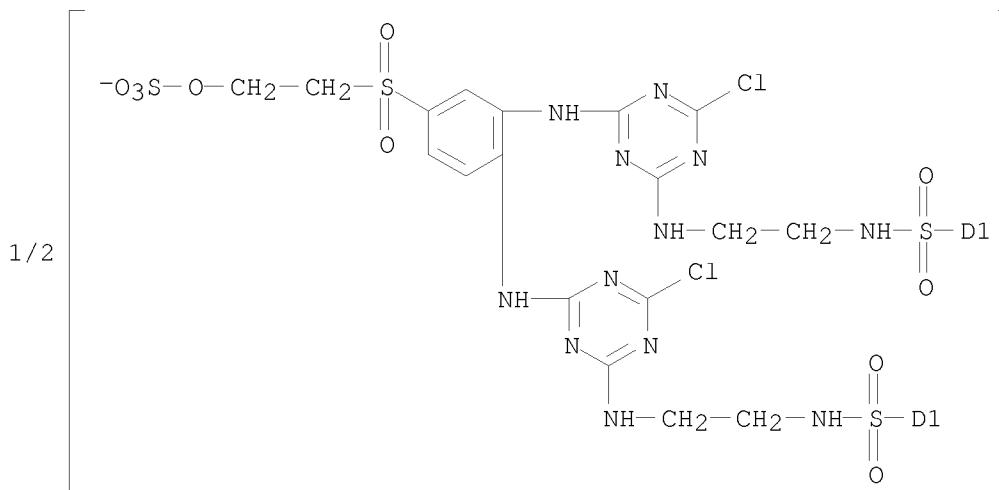
(dye, for cotton)
RN 111611-61-1 CAPLUS
CN Cuprate(5-), [μ -[[C,C'-[[4-[[2-(sulfooxy)ethyl]sulfonyl]-1,2-phenylene]bis[imino(6-chloro-1,3,5-triazine-4,2-diyl)imino-2,1-ethanediyliminosulfonyl]]bis[C-(aminosulfonyl)-29H,31H-phthalocyanine-C,C-disulfonato]](9-)N29,N30,N31,N32:N29',N30',N31',N32']]di-, pentahydrogen (9CI) (CA INDEX NAME)

PAGE 1-A



PAGE 2-A

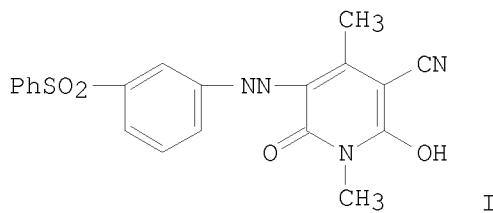




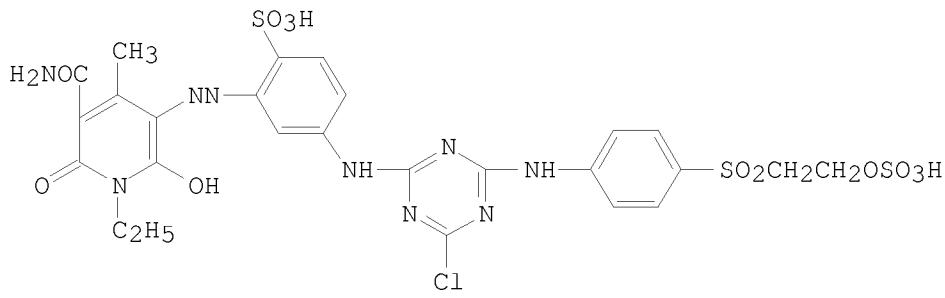
● 5 H +

L23 ANSWER 15 OF 17 CAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 1986:574353 CAPLUS <<LOGINID::20080225>>
DOCUMENT NUMBER: 105:174353
ORIGINAL REFERENCE NO.: 105:28099a,28102a
TITLE: Dyeing of polyester-cellulose blends
INVENTOR(S): Imada, Kunihiko; Sasakura, Masaaki; Ishizuka, Yoshio;
Omura, Takashi; Oshima, Taizo
PATENT ASSIGNEE(S): Sumitomo Chemical Co., Ltd., Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 9 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|------------------------|-------|----------|-----------------|----------|
| ----- | ----- | ----- | ----- | ----- |
| JP 61028084 | A | 19860207 | JP 1984-145777 | 19840712 |
| JP 06011947 | B | 19940216 | | |
| PRIORITY APPLN. INFO.: | | | JP 1984-145777 | 19840712 |
| GI | | | | |



I



II

AB Blend fibers are dyed with disperse dyes and reactive dyes with a 1-bath-2-stage process, and the reactive dyes for cellulosic fibers contain ≥ 1 nucleophilic substitution reaction-type reactive group and ≥ 1 nucleophilic addition reaction-type reactive group. The process includes dyeing a polyester with a disperse dye at 100-140° and pH 4-7.5, adjusting to 80-95° and pH 8-9.5, and dyeing cellulose with a reactive dye at 50-70° and pH 10-13. Thus, a polyester-cotton blend was dyed with I and II.

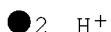
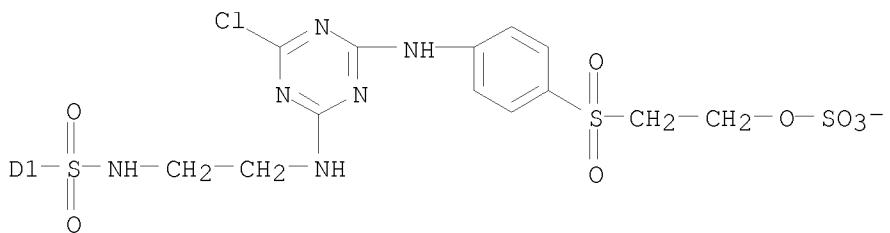
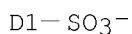
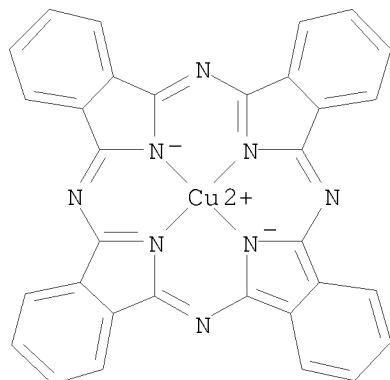
IT 104744-96-9

RL: USES (Uses)

(reactive dyes, dyeing of polyester-cellulose blends with disperse dyes and)

RN 104744-96-9 CAPLUS

CN Cuprate(2-), [C-[[2-[[4-chloro-6-[[4-[[2-(sulfooxy)ethyl]sulfonyl]phenyl]amino]-1,3,5-triazin-2-yl]amino]ethyl]amino]sulfonyl]-29H,31H-phthalocyanine-C-sulfonato(4-)N29,N30,N31,N32]-, dihydrogen (9CI) (CA INDEX NAME)

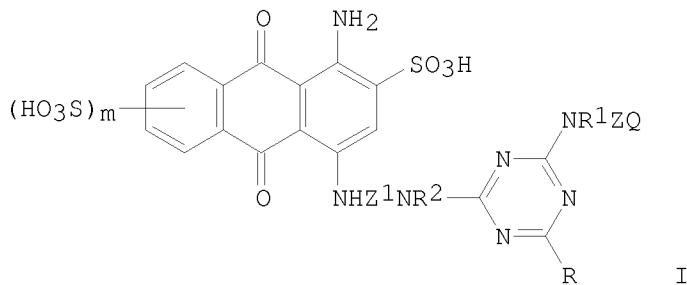


L23 ANSWER 16 OF 17 CAPLUS COPYRIGHT 2008 ACS on STN
 ACCESSION NUMBER: 1985:133547 CAPLUS <<LOGINID::20080225>>
 DOCUMENT NUMBER: 102:133547
 ORIGINAL REFERENCE NO.: 102:20963a, 20966a
 TITLE: Anthraquinone dyes with fiber-reactive monohalotriazinyl and vinylsulfone groups
 INVENTOR(S): Kayane, Yutaka; Omura, Takashi; Otake, Katsumasa;
 Takeshita, Akira
 PATENT ASSIGNEE(S): Sumitomo Chemical Co., Ltd. , Japan
 SOURCE: Ger. Offen., 60 pp.
 CODEN: GWXXBX
 DOCUMENT TYPE: Patent
 LANGUAGE: German
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|------------|-------|-------|-----------------|-------|
| ----- | ----- | ----- | ----- | ----- |

| | | | | |
|------------------------|----|----------|-----------------|------------|
| DE 3419072 | A1 | 19841129 | DE 1984-3419072 | 19840522 |
| DE 3419072 | C2 | 19951221 | | |
| JP 59215361 | A | 19841205 | JP 1983-91215 | 19830523 |
| JP 04032868 | B | 19920601 | | |
| JP 59217765 | A | 19841207 | JP 1983-92944 | 19830525 |
| JP 60092357 | A | 19850523 | JP 1983-201835 | 19831026 |
| JP 04060146 | B | 19920925 | | |
| US 4631341 | A | 19861223 | US 1984-610750 | 19840516 |
| CH 659078 | A5 | 19861231 | CH 1984-2520 | 19840522 |
| PRIORITY APPLN. INFO.: | | | JP 1983-91215 | A 19830523 |
| | | | JP 1983-92944 | A 19830525 |
| | | | JP 1983-201835 | A 19831026 |

OTHER SOURCE(S): CASREACT 102:133547; MARPAT 102:133547
GI



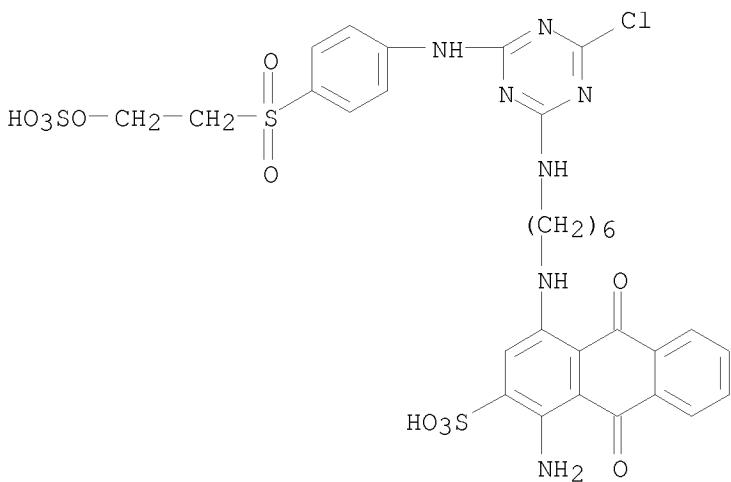
AB Fast blue dyes of general structure I are prepared, where R = halogen; Q = SO₂CH₂:CH₂ or SO₂CH₂CH₂X (X = alkali-eliminable group); Z = (un)substituted phenylene or naphthylene; Z₁ = optionally Me-substituted cyclohexanediyi, (un)substituted phenylenemethylene, or C₂-6 alkylene; R₁ and R₂ = H or (un)substituted lower alkyl; and m = 0, 1, or 2. Thus, reaction of cyanuric chloride [108-77-0] with 4-H₂NC₆H₄SO₂CH₂CH₂OSO₃H [2494-89-5] at 5-10° and then with Na 1-amino-4-(4-aminocyclohexylamino)anthraquinone-2-sulfonate [95152-99-1] at 20-30°, followed by salting, gave I (R = Cl; R₁ = R₂ = H; ZQ = p-C₆H₄SO₂CH₂CH₂OSO₃H; Z₁ = 1,4-cyclohexanediyi; m = 0; Na salt) [95153-12-1] (λ_{max} 622 nm), a brilliant blue dye for cotton with good fastness to light and perspiration. Number of other I were prepared

IT 95153-08-5

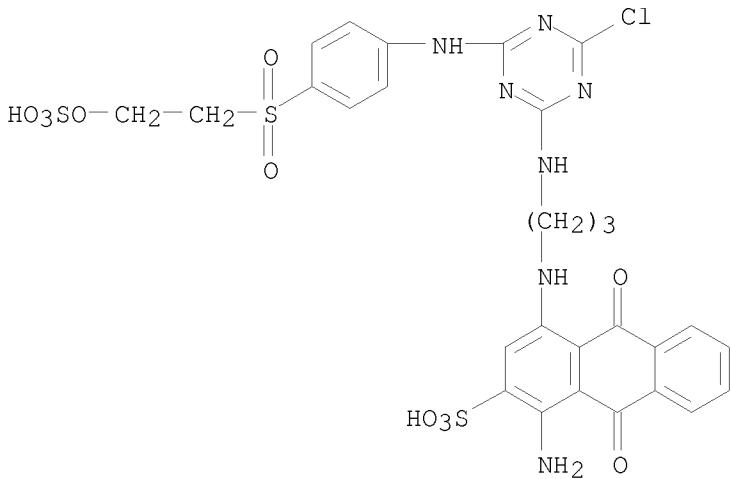
RL: TEM (Technical or engineered material use); USES (Uses)
(dye, for cotton)

RN 95153-08-5 CAPLUS

CN 2-Anthracenesulfonic acid, 1-amino-4-[[6-[[4-chloro-6-[[4-[[2-(sulfoxy)ethyl]sulfonyl]phenyl]amino]-1,3,5-triazin-2-yl]amino]hexyl]amino]-9,10-dihydro-9,10-dioxo- (CA INDEX NAME)

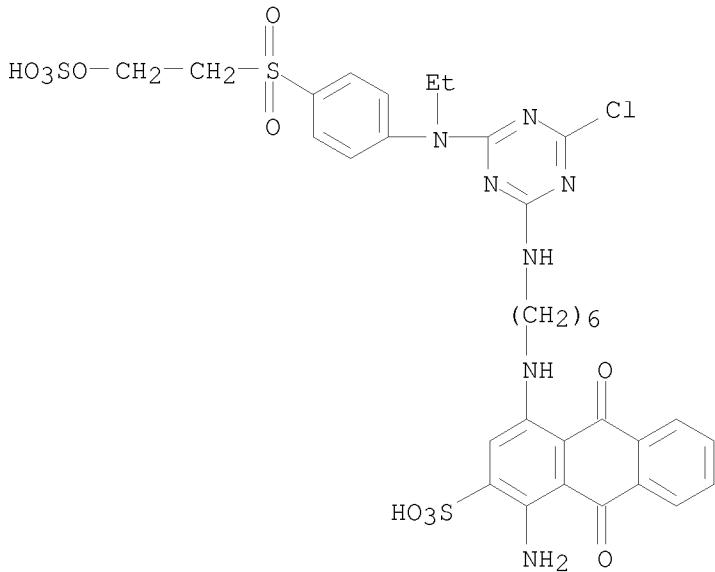


IT 95153-07-4P 95153-09-6P
 RL: IMF (Industrial manufacture); RCT (Reactant); TEM (Technical or engineered material use); PREP (Preparation); RACT (Reactant or reagent); USES (Uses)
 (manufacture of, as reactive dye for cotton)
 RN 95153-07-4 CAPLUS
 CN 2-Anthracenesulfonic acid, 1-amino-4-[[3-[[4-chloro-6-[[4-[[2-sulfoxyethyl]sulfonyl]phenyl]amino]-1,3,5-triazin-2-yl]amino]propyl]amino]-9,10-dihydro-9,10-dioxo-, disodium salt (9CI) (CA INDEX NAME)



●2 Na

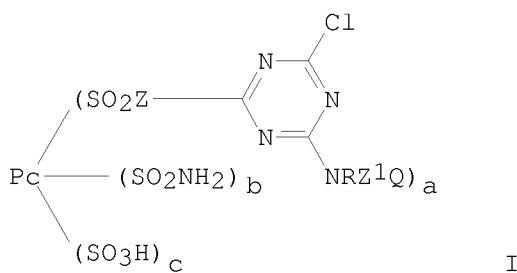
RN 95153-09-6 CAPLUS
 CN 2-Anthracenesulfonic acid, 1-amino-4-[[6-[[4-chloro-6-[[ethyl]sulfonyl]phenyl]amino]-1,3,5-triazin-2-yl]amino]hexylamino]-9,10-dihydro-9,10-dioxo-, disodium salt (9CI) (CA INDEX NAME)



●2 Na

L23 ANSWER 17 OF 17 CAPLUS COPYRIGHT 2008 ACS on STN
 ACCESSION NUMBER: 1985:26388 CAPLUS <<LOGINID::20080225>>
 DOCUMENT NUMBER: 102:26388
 ORIGINAL REFERENCE NO.: 102:4343a, 4346a
 TITLE: Phthalocyanine fiber reactive dyes
 INVENTOR(S): Omura, Takashi; Takahashi, Mikoto; Harada, Naoki;
 Takeshita, Akira
 PATENT ASSIGNEE(S): Sumitomo Chemical Co., Ltd. , Japan
 SOURCE: Ger. Offen., 42 pp.
 CODEN: GWXXBX
 DOCUMENT TYPE: Patent
 LANGUAGE: German
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|------------------------|------------------|----------|-----------------|------------|
| DE 3405204 | A1 | 19840823 | DE 1984-3405204 | 19840214 |
| JP 59152958 | A | 19840831 | JP 1983-25986 | 19830217 |
| JP 01020657 | B | 19890418 | | |
| US 4505714 | A | 19850319 | US 1984-579546 | 19840213 |
| CH 659820 | A5 | 19870227 | CH 1984-751 | 19840216 |
| PRIORITY APPLN. INFO.: | | | JP 1983-25986 | A 19830217 |
| OTHER SOURCE(S): | MARPAT 102:26388 | | | |
| GI | | | | |



AB Reactive phthalocyanine dyes of general structure I are prepared, where Pc = metal-free or metal-containing phthalocyanine residue, R = short-chain alkyl, Z = $NR_1(CH_2)_nNR_2$ ($R_1, R_2 = H, Me, Et; n = 2-6$) or 1,4-piperazinediyl, Z_1 = (un)substituted phenylene or naphthylene, Q = $SO_2CH:CH_2$ or $SO_2CH_2CH_2R_3$ (R_3 = alkali-removable group), $a = 1-3$, b and $c = 0-3$, and $0 < a + b + c \leq 4$. I give light- and wetfast brilliant turquoise dyeings and prints on cellulosic fibers. Thus, reaction of $CuPc(SO_2Cl)_3SO_3H$ with $H_2NCH_2CH_2NH_2$ and aqueous NH_3 , then with cyanuric chloride, and finally with $3-EtNHC_6H_4SO_2CH_2CH_2SO_3H$ gave I ($Z = NHCH_2CH_2NH$, $R = Et$, $Z_1 = m-C_6H_4$, $Q = SO_2CH_2CH_2SO_3Na$, $a = 1.5$, $b = 0.5$, $c = 2$), a water-soluble dye with λ_{max} 670 nm. Other I were similarly prepared

IT 93971-97-2P

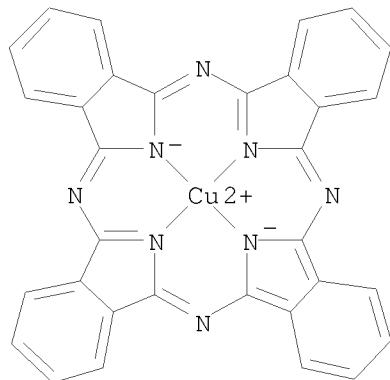
RL: PREP (Preparation)

(manufacture of, as reactive dye for cellulose fibers)

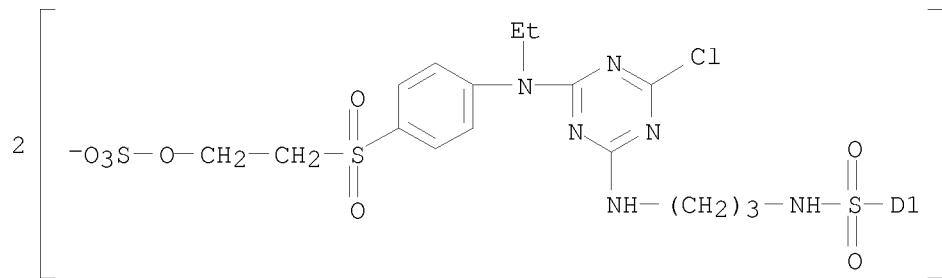
RN 93971-97-2 CAPLUS

CN Cuprate(4-), [C,C-bis[[3-[[4-chloro-6-[ethyl[4-[2-(sulfooxy)ethyl]sulfonyl]phenyl]amino]-1,3,5-triazin-2-yl]amino]propyl]amino]sulfonyl]-29H,31H-phthalocyanine-C,C-disulfonato(5)-N29,N30,N31,N32]-, tetrasodium (9CI) (CA INDEX NAME)

PAGE 1-A



$$2 \left[\text{D1}-\text{SO}_3^- \right]$$



IT 93971-96-1

RL: USES (Uses)

(reactive dye, for cellulose fibers)

RN 93971-96-1 CAPLUS

CN Cuprate(3-), [C-(aminosulfonyl)-C-[[2-[[4-chloro-6-[ethyl[4-[[2-(sulfooxy)ethyl]sulfonyl]phenyl]amino]-1,3,5-triazin-2-yl]amino]ethyl]amino]sulfonyl]-29H,31H-phthalocyanine-C,C-disulfonato(5)-N29,N30,N31,N32]-, trihydrogen (9CI) (CA INDEX NAME)

